



WINDOW TECHNOLOGY
DOOR TECHNOLOGY
AUTOMATIC ENTRANCE SYSTEMS
BUILDING MANAGEMENT SYSTEMS



WINDOW TECHNOLOGY – ORDER CATALOGUE



The EURO-JET Tilt&Turn hardware range

Edition 06/2019

For PVC and aluminium windows and balcony-doors with 16 mm sash groove

- Central locking system
- Hinge-side
- Frame components
- Turn handles
- Accessories

Securing technology for you



The Gretsch-Unitas group

Opening, moving, closing, securing – true to its motto "Securing technology for you", Gretsch-Unitas group provides groundbreaking solutions for window and door technology, automatic entrance systems and building management systems. With its system brands, the group delivers solutions for burglar inhibition at doors and windows, barrier-free construction, doors in escape and rescue routes through to bespoke facade solutions for projects.



Gretsch-Unitas GmbH Baubeschläge



The group of companies is headquartered at GU in Ditzingen where development, administration and production of state-of-the-art architectural hardware for window and door technology takes place. It is equipped with various flexible assembly areas, a state-of-the-art punching shop, and a galvanising and anodising plant.

BKS GmbH



BKS manufactures mechanical and electronic locking cylinders, locks and locking systems as well as panic locks for escape and rescue routes. Harmonised mechanical and electronic system solutions are available for access control.

FERCO International S.A.S.



Ferco is the biggest production site for window hardware in France. Ferco, a subsidiary of the Gretsch-Unitas group of companies, also provides customer care and distribution of all group products throughout France.



GU Automatic



GU Automatic offers innovative, secure and reliable solutions for automatic entrance systems and door automation, revolving doors, all-glass sliding walls, security curved sliding doors and controlled physical access.

ela-soft



By developing GEMOS, the successful facility management and organisation system, ela-soft has become an established market and technology leader in the building services sector.

Securing technology for you







1.0 General information

from page 6

2.0 EURO-JET overview of hardware sets Variable and fixed handle height

from page 10

3.0 EURO-JET accessories

from page 38

4.0 EURO-JET frame components

from page 46

5.0 Window handles

from page 56

6.0 Technical information

from page 78

EURO-JET Tilt&Turn and Turn-Only hardware systems

Basic characteristics and advantages



EURO-JET Tilt&Turn and Turn-Only hardware systems



These top benefits speak for EURO-JET:



Greater flexibility

- Suitable for use by all window fabricators
- For PVC and aluminium profiles

More efficiency and convenience

- Time-saving installation
- Anti-slam device in the stay
- The gear is prepared for a clip-on fabricator's logo
- Solid drilling-jigs with funnel-shaped drill-bushings of hardened steel for stay-bearing, pivot-rest and drill-in hinge enable precise and efficient predrilling, making installation easier and preventing installation errors.
- Positively-locking drive-gear and stay-guide connection with the locking system.

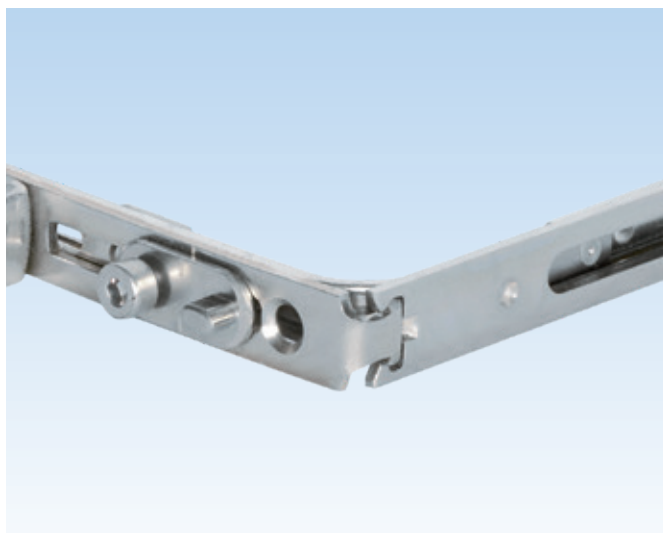
More quality

Surface quality is what counts. A well compounded finish lasts longer. Quality means more satisfaction.

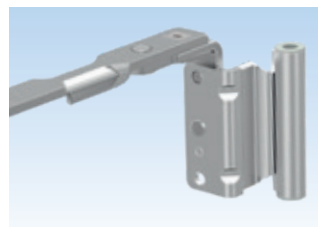
- The finish that really got it! ferGUard*silver optimally and reliably protects all hardware parts against corrosion

Further advantages

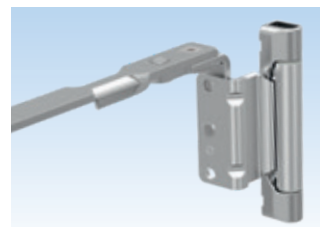
- Duplex locking cam with adjustable gasket pressure of ± 1 mm. The setting can be made with either a 4 or 6 mm Allen key
- 5-year guarantee for the EURO-JET Tilt&Turn hardware range
- Cover caps set also available in handy polythene bag
- Closed, slender, elegant design of the hinges: no visible screws or stay-bearing pins
- Reliable delivery due to modern logistics
- Competent technical advice from our in house and field service
- Design flush with the sash overlap
- Cover caps available in a large selection of colours



Optimum: positively-locking EURO-JET connection



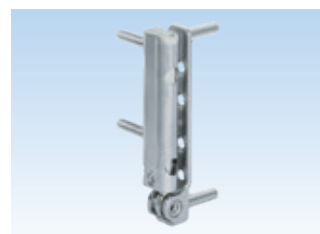
Stay-arm with punched striker



Stay-arm with stay-hinge



Duplex locking cam with adjustable gasket pressure (± 1 mm). Adjustment with either 4 or 6 mm Allen key



Pivot-rest, drill-in hinge and adjusting cap

Product overview

Designation	Clearance [mm]	Sash overlap [mm]	Axis [mm]	Tested hardware load-bearing capacity [kg]	Max. sash rebate width [mm]	Max. sash rebate height [mm]	Version of pivot-rest with positioning pin [mm]
EURO-JET	12	18 / 20	9 / 13	100	1600	2450	3 and 6 mm diameter in different lengths

For all stated weights and dimensions, please refer to our application diagrams. For more information: www.g-u.com



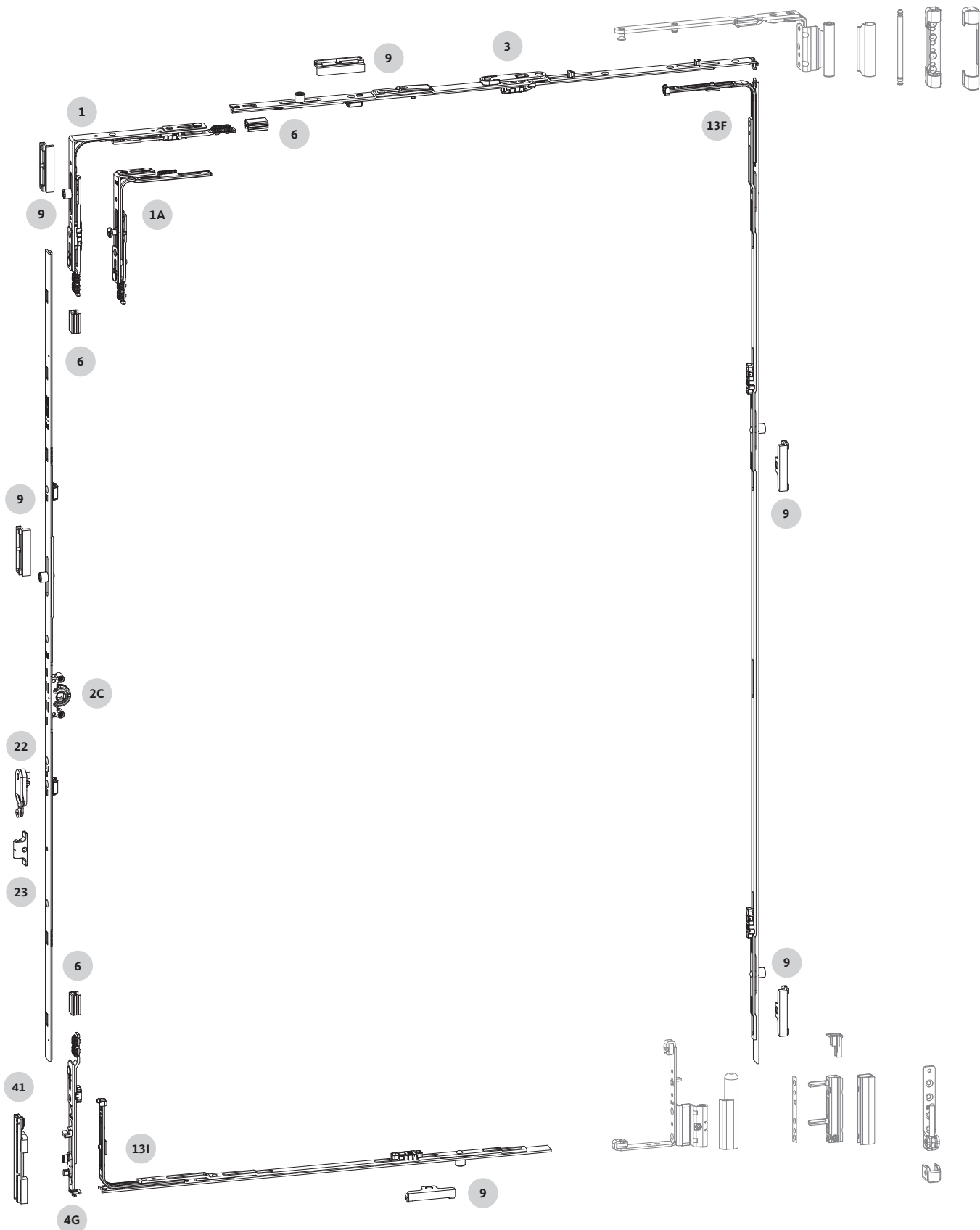
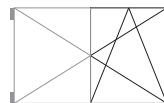
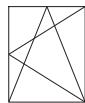


2.1 EURO-JET overview of hardware sets
Variable handle height

2.1.1 Tilt&Turn 1- and 2-sashed	10 – 13
2.1.2 Turn-Only 1-sashed	14 – 17
2.1.3 Dummy-mullion sash	18 – 21

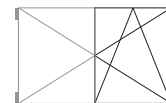
EURO-JET – Tilt&Turn sash – central locking system

1- and 2-sashed, 9 mm and 13 mm axis



EURO-JET – Tilt&Turn sash – central locking system

1- and 2-sashed, 9 mm and 13 mm axis



Corner-drive

Item	SRW	Length	LC	PU	Order number
1	401 – 1600	160/160	1	10	6-35217-00-0-1
1A	280 – 400	45/125	1 [1]	10	6-32238-00-0-1

T&T drive-gear 15, variable handle height

Item	SRH	Length	HH	LC	PU	Order number
2C	480 – 590	270	240 – 295	–	10	G-22080-00-0-1
	591 – 750	430	295 – 375			G-22081-00-0-1
	751 – 1200	880	375 – 600			6-34212-00-0-1
	951 – 1450	1130	457 – 725	1		6-34213-00-0-1
	1201 – 1700	1380	600 – 850	2		6-34214-00-0-1
	1451 – 1950	1630	725 – 975	2		6-34215-00-0-1
	1951 – 2450	2130	975 – 1225	3		6-34216-00-0-1

Gear connector with side-tilter – for side-tilting function – bottom

Item	FFH	PU	Order number
4G	480 – 2450	10	6-32155-03-0-1

Stay-guide

Item	SRW	Length	LC	PU	Order number
3	280 – 400 [2]	350	–	10	6-38999-03-0-1
	401 – 500	350			6-38999-03-0-1
	501 – 750	590			6-38999-06-0-1
	751 – 1000	840	1		6-38999-08-0-1
	951 – 1200	1040			6-38999-10-0-1
	1201 – 1450	1290			6-38999-12-0-1
	Additional stay				
1301 – 1600 [3]	250	–	10	8-00734-00-0-1	

Centre-lock (horizontal bottom)

Item	SRW	Length	LC	PU	Order number
13I	721 – 1100	530	1	10	6-34201-05-0-1
	1101 – 1350	740			6-34201-07-0-1
	1351 – 1600	1050	2		6-34201-10-0-1

Centre-lock on hinge-side (for drive-gears with variable handle height)

Item	SRH	Length	LC	PU	Order number
13F	721 – 1100	530	1	10	6-34201-05-0-1
	1101 – 1350	740			6-34201-07-0-1
	1351 – 1700	1190	2		6-34201-12-0-1
	1701 – 2100	1450			6-34201-15-0-1
	2101 – 2450	1890	3		6-34201-19-0-1
	Can be ordered alternatively:				
	721 – 1100	530	2	10	6-35596-05-0-1
	1101 – 1600	740			6-35596-07-0-1
	1601 – 2450	1450	3		6-35596-15-0-1

Please note: List of abbreviations see page 87

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Rod guide

Item	PU	Order number
6	Quantity as required [4]	100
		8-00805-00-0-0

Standard striker (zamak)

Item	PU	Order number
9	see from page 46	100
		profile-specific

T&T striker

Item	PU	Order number
41	see from page 46	100
		profile-specific

Sash lifter (with mishandling device)

Item	PU	Order number
22		100
		6-29987-00-0-1

Run-up stop for sash lifter

Item	PU	Order number
23	see from page 46	100
		profile-specific

[1] With Cleverle locking cam (LC-MA)

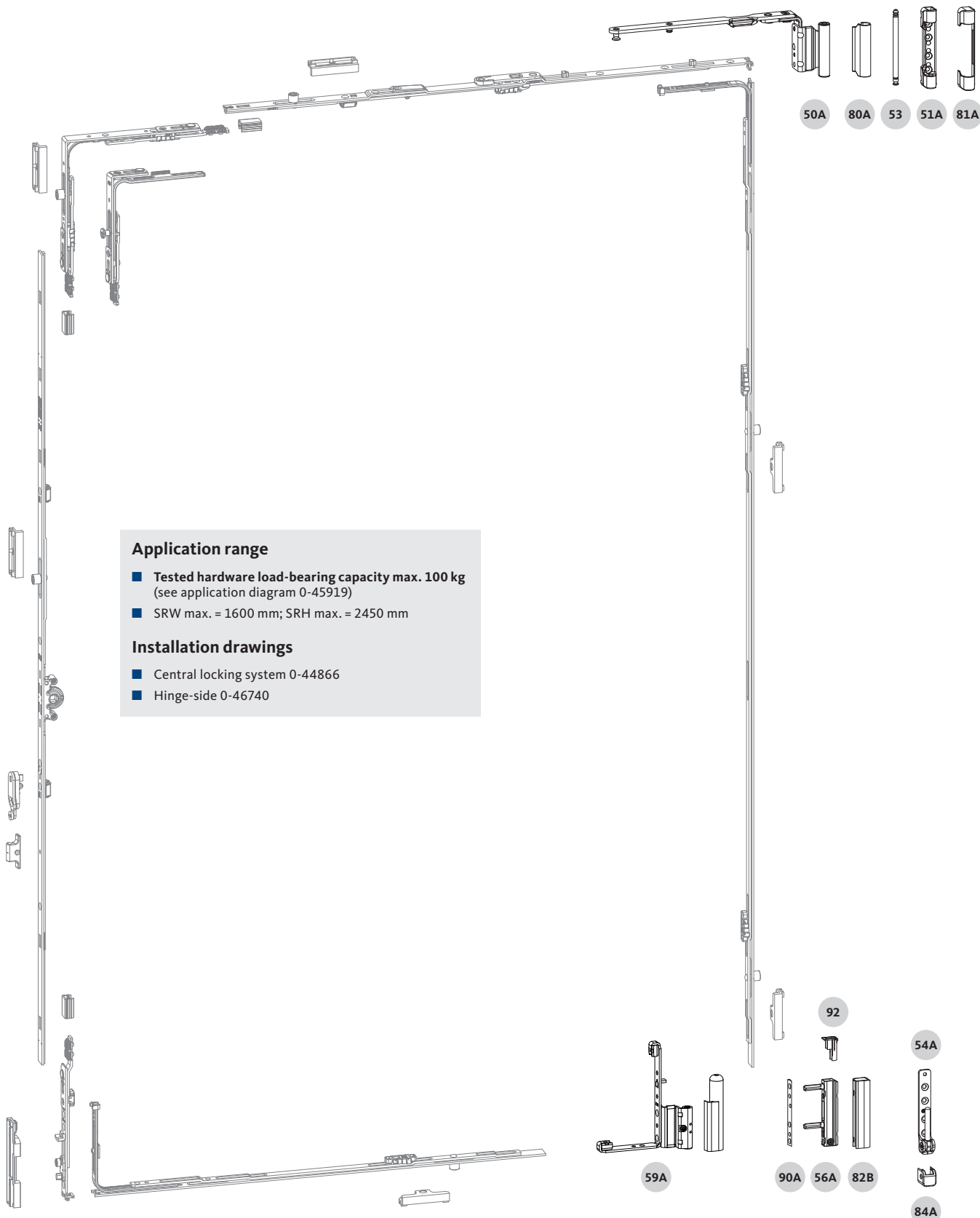
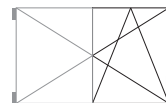
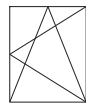
[2] With FFB 280–400 only with corner-drive 6-32238 or 6-32224 (for installation refer to drawing 0-45986).

[3] Use additional stay with SRW 1301-1600. Installation according to drawing 0-46684. Attention: for SRW 1301–1450, an additional stay is required in conjunction with stay-guide 6-38999-10.

[4] When cropping the faceplate by less than 150 mm or when the notches are still visible after cropping, rod guide 8-00805 should be positioned at least 65 mm from the faceplate end.

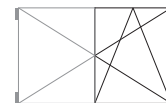
EURO-JET – Tilt&Turn sash – hinge-side

1- and 2-sashed, 9 mm and 13 mm axis



EURO-JET – Tilt&Turn sash – hinge-side

1- and 2-sashed, 9 mm and 13 mm axis



Upper hinge-side

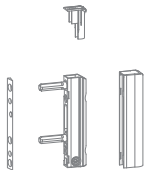
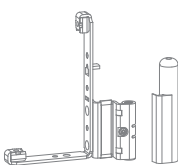
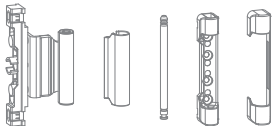
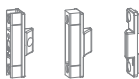
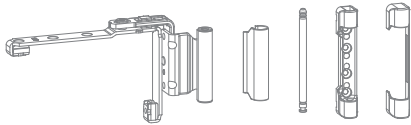
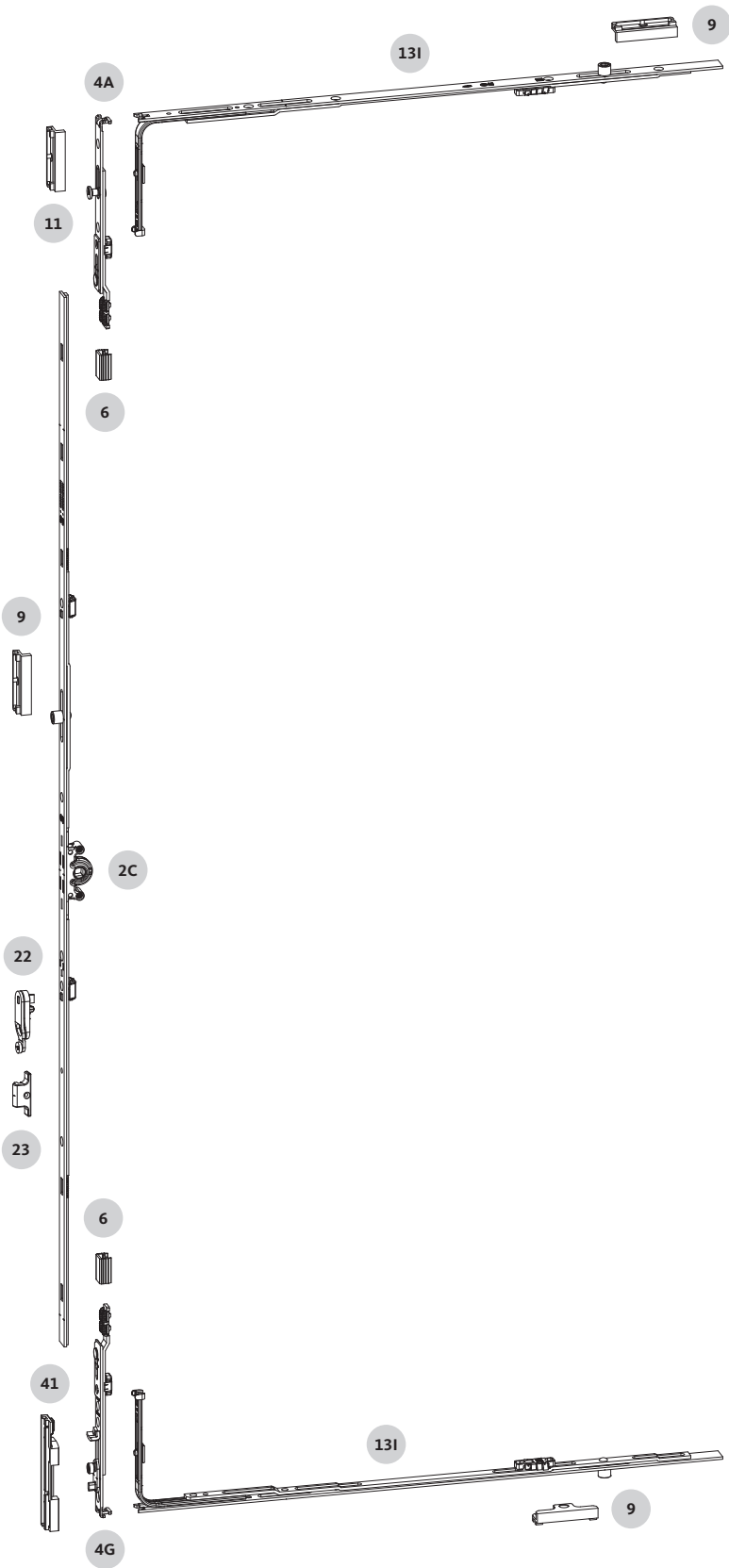
Tilt&Turn stay-arm, AX 9 mm					
Item	SRW	OL	PU	Order number	
				DIN LH	DIN RH
50A	280 – 500	18	10	6-39834-18-L-1	6-39834-18-R-1
		20		6-39834-20-L-1	6-39834-20-R-1
	501 – 750	18		6-39835-18-L-1	6-39835-18-R-1
		20		6-39835-20-L-1	6-39835-20-R-1
	751 – 1200	18		6-39836-18-L-1	6-39836-18-R-1
		20		6-39836-20-L-1	6-39836-20-R-1
	1201 – 1600	18		6-39837-18-L-1	6-39837-18-R-1
		20		6-39837-20-L-1	6-39837-20-R-1
Tilt&Turn stay-arm, AX 13 mm					
50A	280 – 500	20	10	6-39838-20-L-1	6-39838-20-R-1
	501 – 750	20		6-39839-20-L-1	6-39839-20-R-1
	751 – 1200	20		6-39840-20-L-1	6-39840-20-R-1
	1201 – 1600	20		6-39841-20-L-1	6-39841-20-R-1
Cover cap for stay-hinge					
Item	Colours				
80A	see from page 41				
Stay-bearing pin					
Item				PU	Order number
53				100	9-48898-00-0-1
Stay-bearing D/100					
Item				PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm			100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm				6-36026-06-0-1
Cover cap for stay-bearing					
Item	Colours				
81A	see from page 41				

Lower hinge-side

Packer for drill-in hinge				
Item	Pitch	Colour	PU	Order number
90A	6°	dark brown UC 5	100	9-48684-06-0-5
		traffic white (RAL 9016)		9-48684-06-0-7
Plug				
Item			PU	Order number
92			100	9-47426-00-0-1
Drill-in hinge D/100 – without turn-brake				
Item			PU	Order number
56A	for PVC profile, positioning pin Ø 6, L = 23 mm		100	6-36180-01-0-1
ALU 16 rebate corner-hinge				
Item			PU	Order number
59A	for aluminium profile with 16 mm sash groove		100	6-37455-**-L/R*
Cover cap for drill-in hinge				
Item	Colours			
82B	see from page 41			
Pivot-rest D/100				
Item			PU	Order number
54A	Positioning pin Ø 3, L = 2.5 mm		100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm			6-36882-22-0-1
Cover cap for pivot-rest				
Item	Colours			
84A	see from page 41			

EURO-JET – Turn-Only sash – central locking system

1-sashed, 9 mm and 13 mm axis



EURO-JET – Turn-Only sash – central locking system

1-sashed, 9 mm and 13 mm axis



Gear connector 90° – top

Item	SRH	Length	LC	PU	Order number
4A	480 – 2450	160	1	10	6-32104-00-0-1

T&T drive-gear 15, variable handle height

Flat drive gear 25, variable handle height						
Item	SRH	Length	HH	LC	PU	Order number
2C	480 – 590	270	240 – 295	–	10	G-22080-00-0-1
	591 – 750	430	295 – 375			G-22081-00-0-1
	751 – 1200	880	375 – 600	1		6-34212-00-0-1
	951 – 1450	1130	457 – 725			6-34213-00-0-1
	1201 – 1700	1380	600 – 850	2		6-34214-00-0-1
	1451 – 1950	1630	725 – 975			6-34215-00-0-1
	1951 – 2450	2130	975 – 1225	3		6-34216-00-0-1

Gear connector with side-tilter – for side-tilting function – bottom

Item	SRH	Length	LC	PU	Order number
4G	480 – 2450			10	6-32155-03-0-1

Centre-lock (horizontal at top and bottom)

Item	SRW	Length	LC	PU	Order number
13I	721 – 1100	530	1	10	6-34201-05-0-1
	1101 – 1350	740			6-34201-07-0-1
	1351 – 1600	1050	2		6-34201-10-0-1

Rod guide

Item	Quantity as required [1]	PU	Order number
6		100	8-00805-00-0-0

Standard striker (zamak)

Item	see from page 46	PU	Order number
9		100	profile-specific

T&T striker

Item	see from page 46	PU	Order number
41		100	profile-specific

Sash lifter (with mishandling device)

Item		PU	Order number
22		100	6-29987-00-0-1

Run-up stop for sash lifter

Item	see from page 46	PU	Order number
23		100	profile-specific

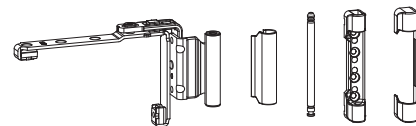
Please note: List of abbreviations see page 87

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

[1] When cropping the faceplate by less than 150 mm or when the notches are still visible after cropping, rod guide 8-00805 should be positioned at least 65 mm from the faceplate end.

EURO-JET – Turn-Only sash – hinge-side

1-sashed, 9 mm and 13 mm axis



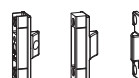
61J 80A 53 51A 81A

Application range

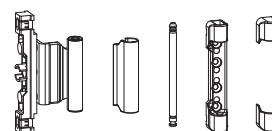
- Tested hardware load-bearing capacity max. 100 kg (see application diagram 0-45919)
- SRW max. = 1600 mm; SRH max. = 2450 mm

Installation drawings

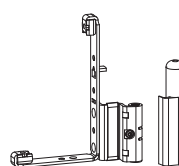
- Central locking system 0-44866
- Hinge-side 0-46740



64B 64A 64C



62A 80A 53 51A 81A



59A

92



54A

90A

56A

82B

84A

EURO-JET – Turn-Only sash – hinge-side

1-sashed, 9 mm and 13 mm axis



Upper hinge-side

Turn-Only hinge, AX 9 mm			
Item	OL	PU	Order number
61J	18	50	6-39147-18-0-1
	20		6-39147-20-0-1
Turn-Only hinge, AX 13 mm			
61J	18	50	6-39148-18-0-1
	20		6-39148-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Lower hinge-side

Packer for drill-in hinge				
Item	Pitch	Colour	PU	Order number
90A	6°	dark brown UC 5	100	9-48684-06-0-5
		traffic white (RAL 9016)		9-48684-06-0-7
Plug				
Item			PU	Order number
92			100	9-47426-00-0-1
Drill-in hinge D/100 – without turn-brake				
Item			PU	Order number
56A	for PVC profile, positioning pin Ø 6, L = 23 mm		100	6-36180-01-0-1
Cover cap for drill-in hinge				
Item	Colours			
82B	see from page 41			
ALU 16 rebate corner-hinge				
Item			PU	Order number
59A	for aluminium profile with 16 mm sash groove, cover cap see page 40		100	6-37455-**-L/R-*
Pivot-rest D/100				
Item			PU	Order number
54A	Positioning pin Ø 3, L = 2,5 mm		100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm			6-36882-22-0-1
Cover cap for pivot-rest				
Item	Colours			
84A	see from page 41			

Centre hinge-side

Centre-closer, concealed (adjustable)			
Item		PU	Order number
64B	Sash part	100	6-34229-00-0-1

Centre-closer, concealed (not adjustable)			
Item		PU	Order number
64A	Sash part	100	9-40564-00-0-1

Centre-closer, concealed			
Item		PU	Order number
64C	Frame part	100	profile-specific

Turn-Only centre rebate-hinge (with compensation)				
Item	AX	OL	PU	Order number
62A	9	18	100	6-36841-18-0-1
		20		6-36841-20-0-1
	13	18		6-36842-18-0-1
		20		6-36842-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

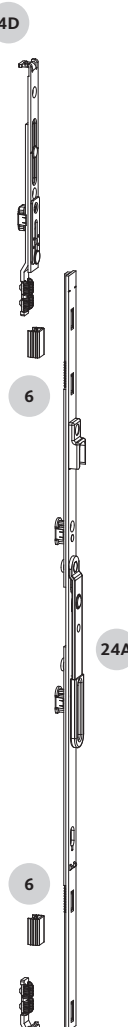
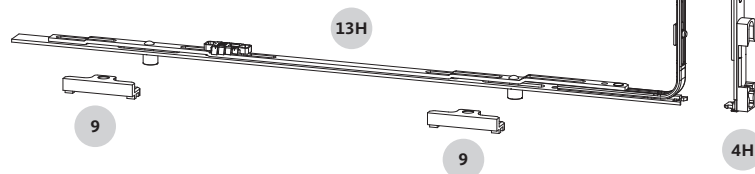
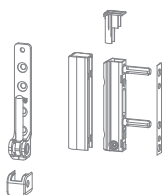
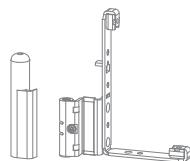
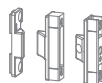
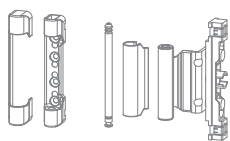
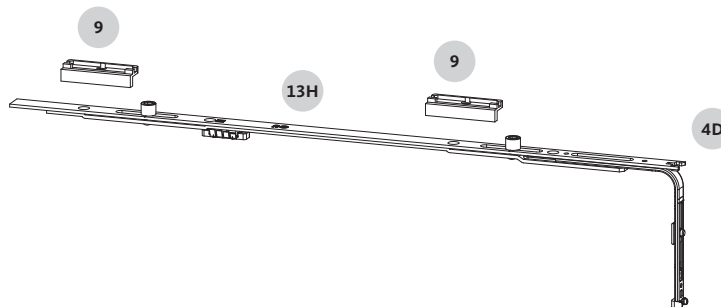
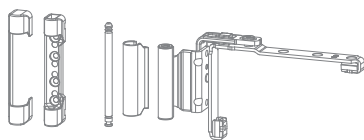
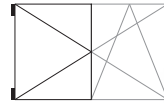
Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Please note: List of abbreviations see page 87.

Please note: List of abbreviations see page 87

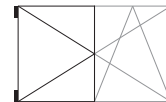
EURO-JET ZH lever-operated gear – dummy-mullion sash – central locking system

2-sashed, 9 mm and 13 mm axis



EURO-JET ZH lever-operated gear – dummy-mullion sash – central locking system

2-sashed, 9 mm and 13 mm axis



Gear connector 90° – top

Item	SRH	Length	LC	PU	Order number
4D	741 – 2450	160	1	10	6-32303-00-0-1

Rod guide

Item		PU	Order number
6	Quantity as required [1]	100	8-00805-00-0-0

ZH lever-operated gear, variable handle height

Item	SRH		PU	Order number
24A	741 – 950		10	G-22170-00-0-1
	951 – 1450			G-22171-00-0-1
	1451 – 1950			G-22172-00-0-1
	1951 – 2450			G-22173-00-0-1

Standard striker (zamak)

Item		PU	Order number
9	see from page 46	100	profile-specific

Bottom gear connector

Item	SRH		PU	Order number
4H	741 – 2450		10	6-34998-00-0-1

Centre-lock (horizontal at top and bottom)

General Item (nominal in top and bottom)					
Item	SRW	Length	LC	PU	Order number
13H	– 750	215	1	10	6-32010-00-0-1
	751–1350	530	2		6-35596-05-0-1
	1351–1600	740			6-35596-07-0-1

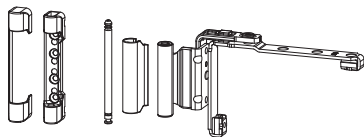
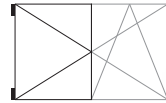
Please note: List of abbreviations see page 87

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

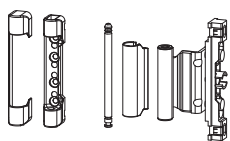
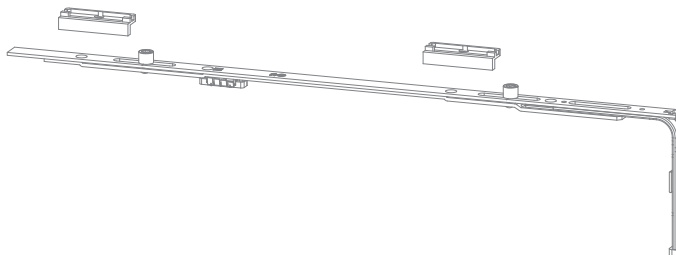
[1] When cropping the faceplate by less than 150 mm or when the notches are still visible after cropping, rod guide 8-00805 should be positioned at least 65 mm from the faceplate end.

EURO-JET ZH lever-operated gear – dummy-mullion sash – hinge-side

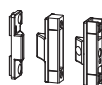
2-sashed, 9 mm and 13 mm axis



81A 51A 53 80A 61J



81A 51A 53 80A 62A



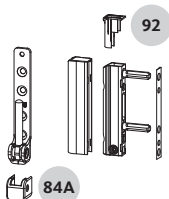
64C 64A 64B

Application range

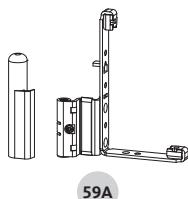
- Tested hardware load-bearing capacity max. 100 kg (see application diagram 0-45919)
- SRW max. = 1600 mm; SRH max. = 2450 mm

Installation drawings

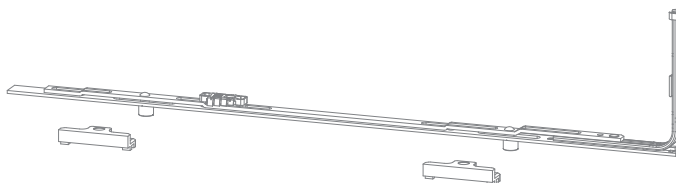
- Central locking system 0-46573 and 0-44866
- Hinge-side 0-46740



92 84A 54A 82B 56A 90A

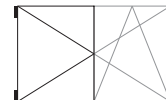


59A



EURO-JET ZH lever-operated gear – dummy-mullion sash – hinge-side

2-sashed, 9 mm and 13 mm axis



Upper hinge-side

Turn-Only hinge, AX 9 mm			
Item	OL	PU	Order number
61J	18	50	6-39147-18-0-1
	20		6-39147-20-0-1
Turn-Only hinge, AX 13 mm			
61J	18	50	6-39148-18-0-1
	20		6-39148-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Lower hinge-side

Packer for drill-in hinge				
Item	Pitch	Colour	PU	Order number
90A	6°	dark brown UC 5	100	9-48684-06-0-5
		traffic white (RAL 9016)		9-48684-06-0-7
Plug				
Item			PU	Order number
92			100	9-47426-00-0-1
Drill-in hinge D/100 – without turn-brake				
Item			PU	Order number
56A	for PVC profile, positioning pin Ø 6, L = 23 mm		100	6-36180-01-0-1
Cover cap for drill-in hinge				
Item	Colours			
82B	see from page 41			
ALU 16 rebate corner-hinge				
Item			PU	Order number
59A	for aluminium profile with 16 mm sash groove, cover cap see page 40		100	6-37455-**-L/R*
Pivot-rest D/100				
Item			PU	Order number
54A	Positioning pin Ø 3, L = 2.5 mm		100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm			6-36882-22-0-1
Cover cap for pivot-rest				
Item	Colours			
84A	see from page 41			

Centre hinge-side

Centre-closer, concealed (adjustable)			
Item		PU	Order number
64B	Sash part	100	6-34229-00-0-1

Centre-closer, concealed (not adjustable)			
Item		PU	Order number
64A	Sash part	100	9-40564-00-0-1

Centre-closer, concealed			
Item		PU	Order number
64C	Frame part	100	profile-specific

Turn-Only centre rebate-hinge (with compensation)				
Item	AX	OL	PU	Order number
62A	9	18	100	6-36841-18-0-1
		20		6-36841-20-0-1
	13	18		6-36842-18-0-1
		20		6-36842-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Please note: List of abbreviations see page 87.

Please note: List of abbreviations see page 87



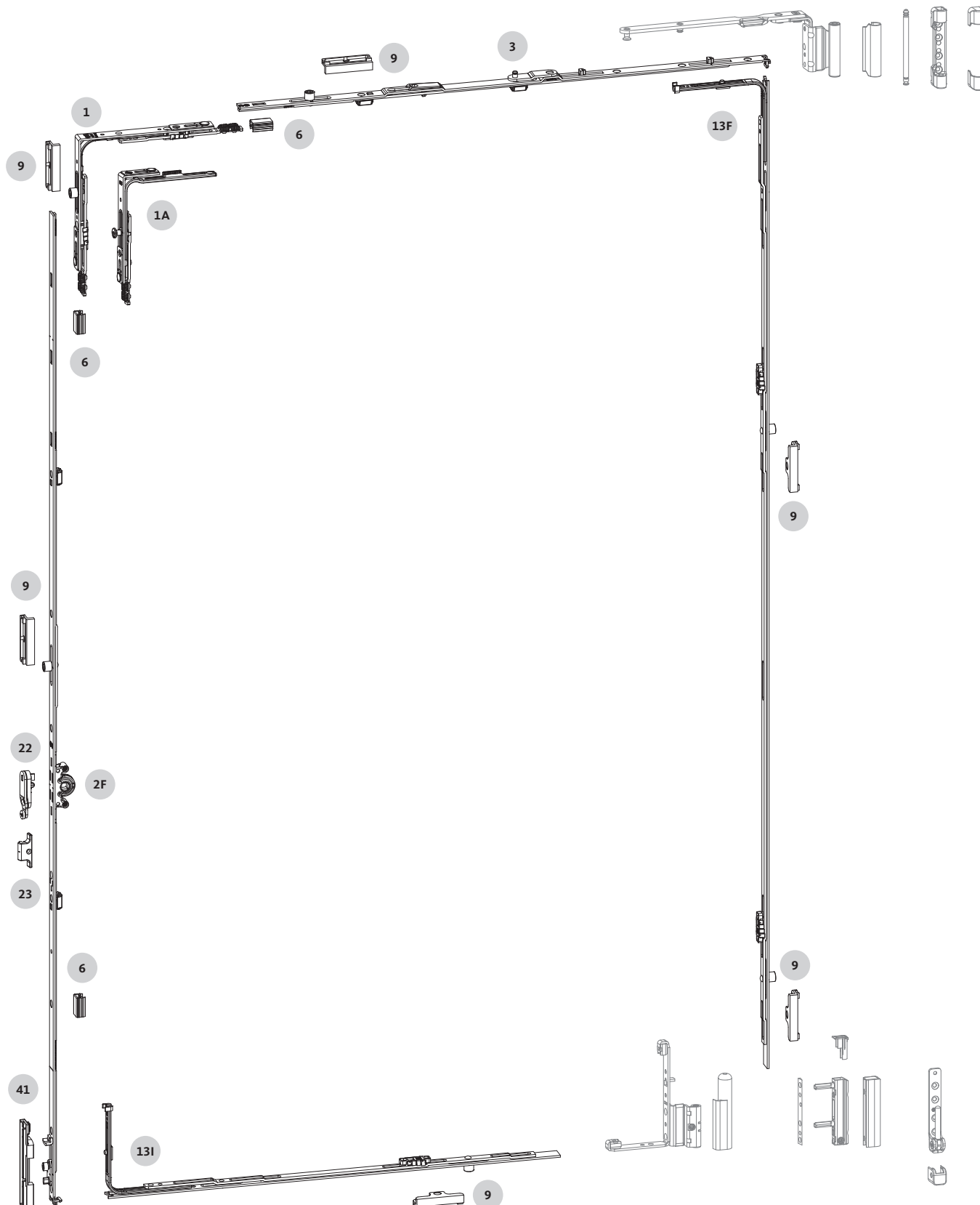
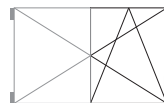
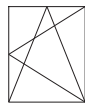


2.2 EURO-JET overview of hardware sets
Fixed handle height

2.2.1 Tilt&Turn 1- and 2-sashed	24 – 27
2.2.2 Turn-Only 1-sashed	28 – 31
2.2.3 Dummy-mullion sash	32 – 35

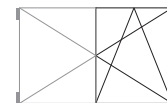
EURO-JET – Tilt&Turn sash – central locking system

1- and 2-sashed, 9 mm and 13 mm axis



EURO-JET – Tilt&Terun sash – central locking system

1- and 2-sashed, 9 mm and 13 mm axis



Corner-drive

Item	SRW	Length	LC	PU	Order number
1	401 – 1600	160/160	1	10	6-35217-00-0-1
1A	280 – 400	45/125	1 [1]	10	6-32238-00-0-1

T&T drive-gear 15 BS, fixed handle height

2F drive gear 25-35, fixed handle height						
Item	SRH	Length	HH	LC	PU	Order number
2F	360 – 490 [2]	363	155	–	10	G-22000-00-0-1
	450 – 550	390	155			G-22001-00-0-1
	551 – 720	560	200			G-22002-00-0-1
	721 – 850	690	250	1		6-34219-03-0-1
	851 – 1100	940	400			6-34219-04-0-1
	1101 – 1350	1190	500			6-34219-05-0-1
	1351 – 1600	1440	600	2		6-34219-07-0-1
	1601 – 1850	1690	600	3		6-34219-08-0-1
	1851 – 2100	1940	980			6-34219-13-0-1
	2101 – 2350	2190	980			4

Stay-guide

Item	SRW	Length	LC	PU	Order number
3	280 – 400 [3]	350	–	10	6-38999-03-0-1
	401 – 500	350			6-38999-03-0-1
	501 – 750	590			6-38999-06-0-1
	751 – 1000	840	1		6-38999-08-0-1
	951 – 1200	1040			6-38999-10-0-1
	1201 – 1600	1290			6-38999-xx-0-1
	Additional stay				
1301 – 1600 [4]	250	–	10	8-00734-00-0-1	

Centre-lock (horizontal bottom)

Item	SRW	Length	LC	PU	Order number
13I	721 – 1100	530	1	10	6-34201-05-0-1
	1101 – 1350	740			6-34201-07-0-1
	1351 – 1600	1050	2		6-34201-10-0-1

Centre-lock on hinge-side (for drive-gears with fixed handle height)

Item	SRH	Length	LC	PU	Order number
13F	721 – 1100	530	1	10	6-34201-05-0-1
	1101 – 1350	740			6-34201-07-0-1
	1351 – 1850	1190	2		6-34201-12-0-1
	1851 – 2100	1450			6-34201-15-0-1
	2101 – 2500	1890	3		6-34201-19-0-1
	Can be ordered alternatively:				
	721 – 1100	530	2	10	6-35596-05-0-1
	1101 – 1600	740			6-35596-07-0-1
	1601 – 2450	1450	3		6-35596-15-0-1

Rod guide

Item	PU	Order number
6	Quantity as required [5]	100 8-00805-00-0-0

Standard striker (zamak)

Item	PU	Order number
9	see from page 46	100 profile-specific

T&T striker

Item	PU	Order number
41	see from page 46	100 profile-specific

Sash lifter (with mishandling device)

Item	PU	Order number
22		100 6-29987-00-0-1

Run-up stop for sash lifter

Item	PU	Order number
23	see from page 46	100 profile-specific

Please note: List of abbreviations see page 87

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

[1] With Cleverle locking cam (LC-MA)

[2] SEH 260–390 only with corner-drive 6-32238 or 6-32224.

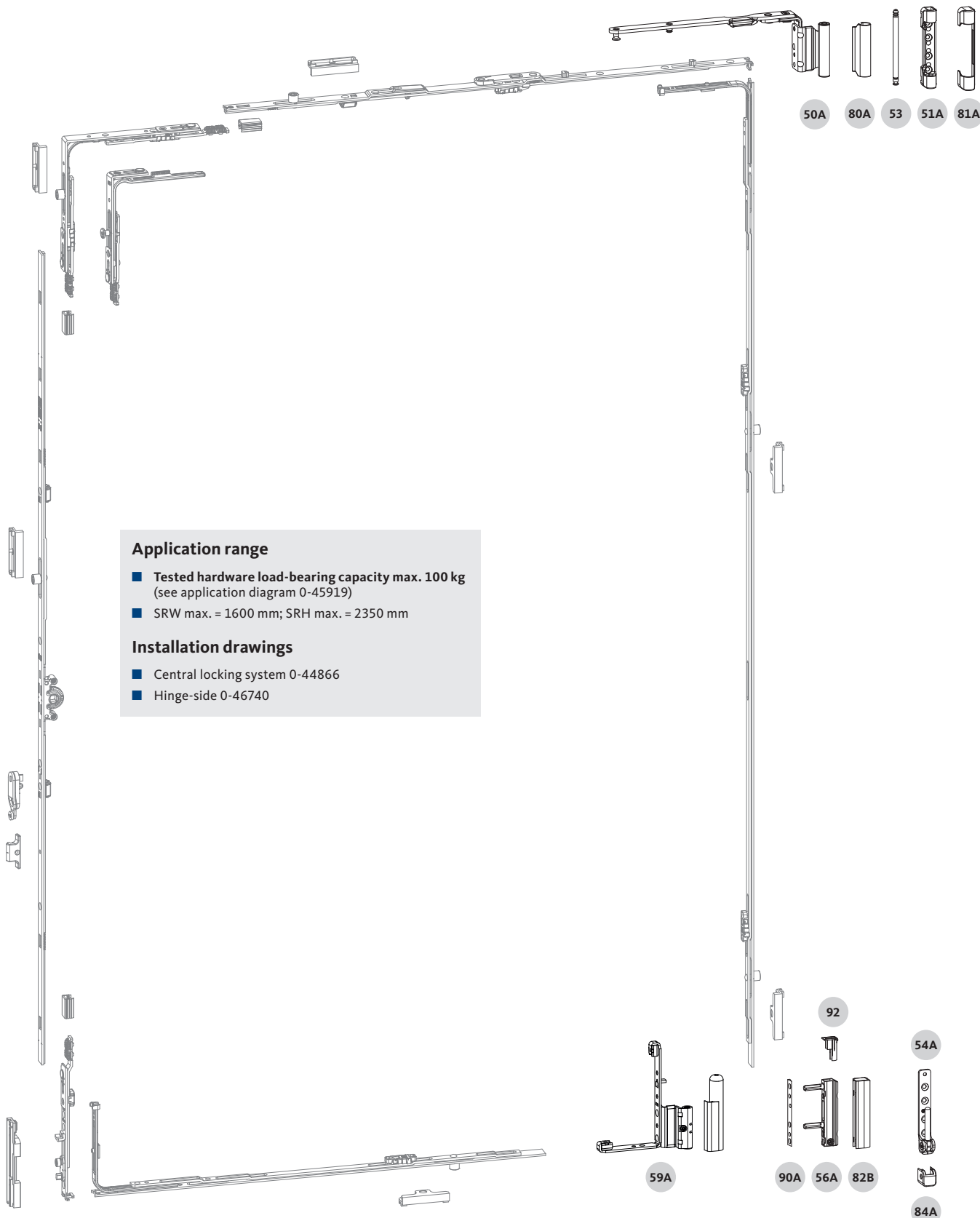
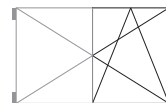
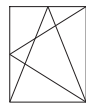
[3] With FFB 280–400 only with corner-drive 6-32238 or 6-32224 (for installation refer to drawing 0-45986).

[4] Use additional stay with SRW 1301–1600. Installation according to drawing 0-46684. Attention: for SRW 1301–1450, an additional stay is required in conjunction with stay-guide 6-38999-10.

[5] When cropping the faceplate by less than 150 mm or when the notches are still visible after cropping, rod guide 8-00805 should be positioned at least 65 mm from the faceplate end.

EURO-JET – Tilt&Turn sash – hinge-side

1- and 2-sashed, 9 mm and 13 mm axis



Application range

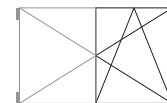
- Tested hardware load-bearing capacity max. 100 kg (see application diagram 0-45919)
- SRW max. = 1600 mm; SRH max. = 2350 mm

Installation drawings

- Central locking system 0-44866
- Hinge-side 0-46740

EURO-JET – Tilt&Turn sash – hinge-side

1- and 2-sashed, 9 mm and 13 mm axis



Upper hinge-side

Tilt&Turn stay-arm, AX 9 mm					
Item	SRW	OL	PU	Order number	
				DIN LH	DIN RH
50A	280 – 500	18	10	6-39834-18-L-1	6-39834-18-R-1
		20		6-39834-20-L-1	6-39834-20-R-1
	501 – 750	18		6-39835-18-L-1	6-39835-18-R-1
		20		6-39835-20-L-1	6-39835-20-R-1
	751 – 1200	18		6-39836-18-L-1	6-39836-18-R-1
		20		6-39836-20-L-1	6-39836-20-R-1
	1201 – 1600	18		6-39837-18-L-1	6-39837-18-R-1
		20		6-39837-20-L-1	6-39837-20-R-1
Tilt&Turn stay-arm, AX 13 mm					
50A	280 – 500	20	10	6-39838-20-L-1	6-39838-20-R-1
	501 – 750	20		6-39839-20-L-1	6-39839-20-R-1
	751 – 1200	20		6-39840-20-L-1	6-39840-20-R-1
	1201 – 1600	20		6-39841-20-L-1	6-39841-20-R-1
Cover cap for stay-hinge					
Item	Colours				
80A	see from page 41				
Stay-bearing pin					
Item				PU	Order number
53				100	9-48898-00-0-1
Stay-bearing D/100					
Item				PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm			100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm				6-36026-06-0-1
Cover cap for stay-bearing					
Item	Colours				
81A	see from page 41				

Lower hinge-side

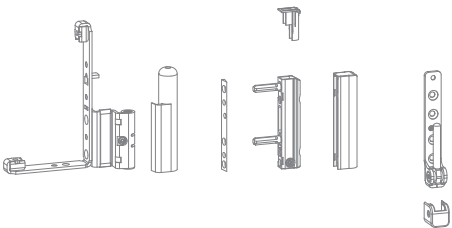
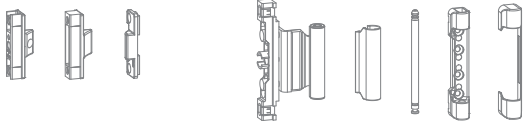
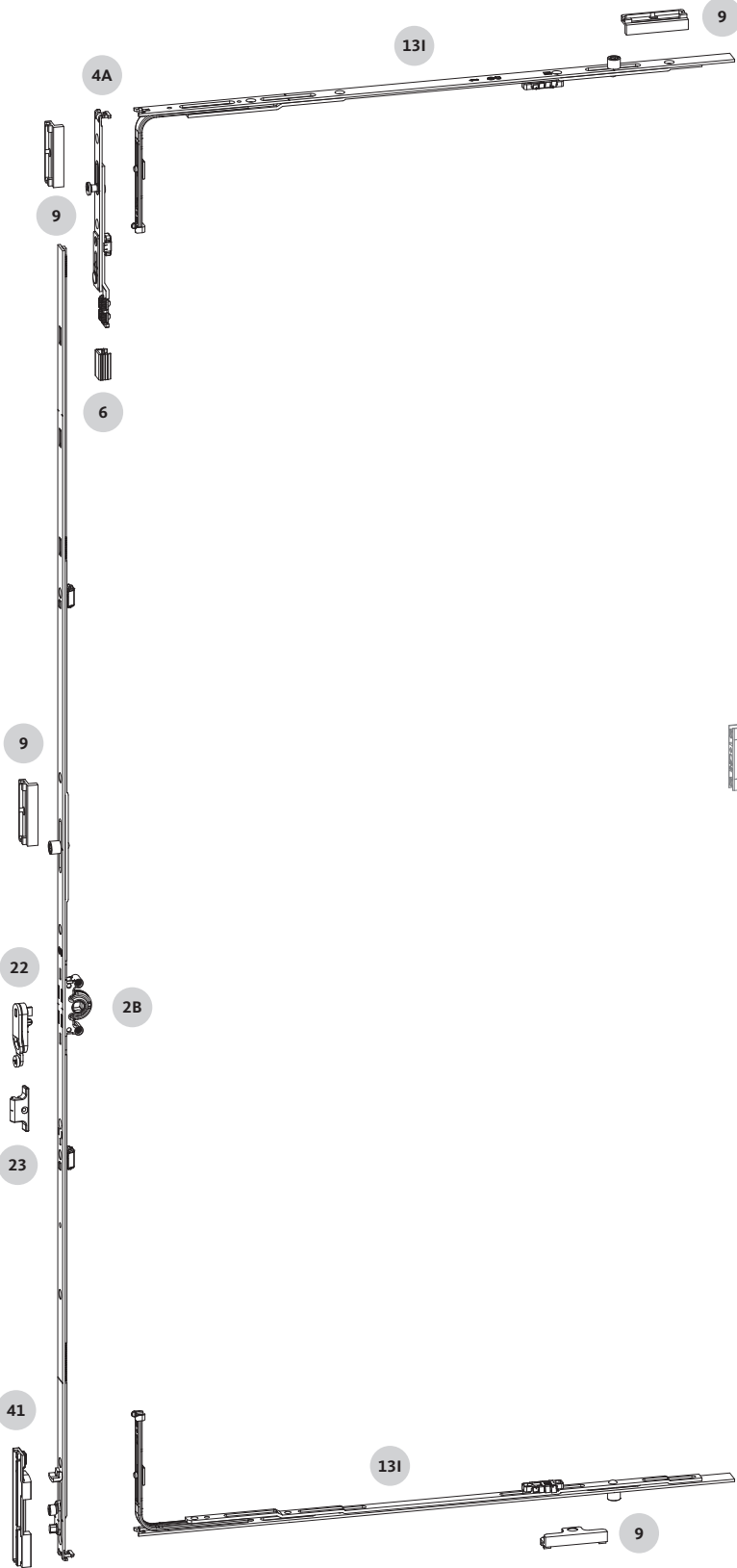
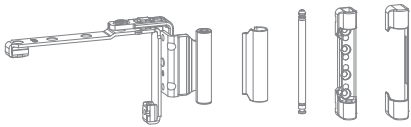
Packer for drill-in hinge				
Item	Pitch	Colour	PU	Order number
90A	6°	dark brown UC 5	100	9-48684-06-0-5
		traffic white (RAL 9016)		9-48684-06-0-7
Plug				
Item			PU	Order number
92			100	9-47426-00-0-1
Drill-in hinge D/100 – without turn-brake				
Item			PU	Order number
56A	for PVC profile, positioning pin Ø 6, L = 23 mm		100	6-36180-01-0-1
Cover cap for drill-in hinge				
Item	Colours			
82B	see from page 41			
ALU 16 rebate corner-hinge				
Item			PU	Order number
59A	for aluminium profile with 16 mm sash groove, cover cap see page 40		100	6-37455-**-L/R-*
Pivot-rest D/100				
Item			PU	Order number
54A	Positioning pin Ø 3, L = 2.5 mm		100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm			6-36882-22-0-1
Cover cap for pivot-rest				
Item	Colours			
84A	see from page 41			

EURO-JET – Turn-Only sash – central locking system

1-sashed, 9 mm and 13 mm axis



kg
max. 100



EURO-JET – Turn-Only sash – central locking system

1-sashed, 9 mm and 13 mm axis



Gear connector 90° – top

Item	SRH	Length	LC	PU	Order number
4A	480 – 2450	160	1	10	6-32104-00-0-1

Rod guide

Item		PU	Order number
6	Quantity as required [1]	100	8-00805-00-0-0

T&T drive-gear 15 BS, fixed handle height

Item	SRH	Length	HH	LC	PU	Order number
2B	360 – 490	363	155	1	10	G-22000-00-0-1
	450 – 550	390	155			G-22001-00-0-1
	551 – 720	560	200			G-22002-00-0-1
	721 – 850	690	250			6-34219-03-0-1
	851 – 1100	940	400	2		6-34219-04-0-1
	1101 – 1350	1190	500			6-34219-05-0-1
	1351 – 1600	1440	600			6-34219-07-0-1
	1601 – 1850	1690	600	3		6-34219-08-0-1
	1851 – 2100	1940	980			6-34219-13-0-1
	2101 – 2350	2190	980			4

Standard striker (zamak)

Item		PU	Order number
9	see from page 46	100	profile-specific

T&T striker

Item		PU	Order number
41	see from page 46	100	profile-specific

Centre-lock (horizontal at top and bottom)

Item	SRW	Length	LC	PU	Order number
13I	721 – 1100	530	1	10	6-34201-05-0-1
	1101 – 1350	740			6-34201-07-0-1
	1351 – 1600	1050	2		6-34201-10-0-1

Sash lifter (with mishandling device)

Item		PU	Order number
22		100	6-29987-00-0-1

Run-up stop for sash lifter

Item		PU	Order number
23	see from page 46	100	profile-specific

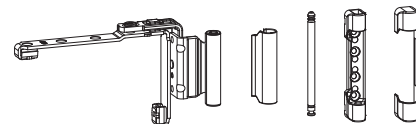
Please note: List of abbreviations see page 87

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

[1] When cropping the faceplate by less than 150 mm or when the notches are still visible after cropping, rod guide 8-00805 should be positioned at least 65 mm from the faceplate end.

EURO-JET – Turn-Only sash – hinge-side

1-sashed, 9 mm and 13 mm axis



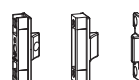
61J 80A 53 51A 81A

Application range

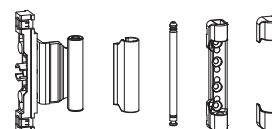
- Tested hardware load-bearing capacity max. 100 kg (see application diagram 0-45919)
- SRW max. = 1600 mm; SRH max. = 2350 mm

Installation drawings

- Central locking system 0-44866
- Hinge-side 0-46740

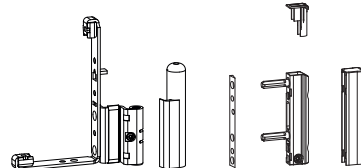


64B 64A 64C



62A 80A 53 51A 81A

92



59A 90A 56A 82B

54A

84A

EURO-JET – Turn-Only sash – hinge-side

1-sashed, 9 mm and 13 mm axis



Upper hinge-side

Turn-Only hinge, AX 9 mm			
Item	OL	PU	Order number
61J	18	50	6-39147-18-0-1
	20		6-39147-20-0-1
Turn-Only hinge, AX 13 mm			
61J	18	50	6-39148-18-0-1
	20		6-39148-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Lower hinge-side

Packer for drill-in hinge				
Item	Pitch	Colour	PU	Order number
90A	6°	dark brown UC 5	100	9-48684-06-0-5
		traffic white (RAL 9016)		9-48684-06-0-7
Plug				
Item			PU	Order number
92			100	9-47426-00-0-1
Drill-in hinge D/100 – without turn-brake				
Item			PU	Order number
56A	for PVC profile, positioning pin Ø 6, L = 23 mm		100	6-36180-01-0-1
Cover cap for drill-in hinge				
Item	Colours			
82B	see from page 41			
ALU 16 rebate corner-hinge				
Item			PU	Order number
59A	for aluminium profile with 16 mm sash groove, cover cap see page 40		100	6-37455-**-L/R-*
Pivot-rest D/100				
Item			PU	Order number
54A	Positioning pin Ø 3, L = 2.5 mm		100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm			6-36882-22-0-1
Cover cap for pivot-rest				
Item	Colours			
84A	see from page 41			

Centre hinge-side

Centre-closer, concealed (adjustable)			
Item		PU	Order number
64B	Sash part	100	6-34229-00-0-1

Centre-closer, concealed (not adjustable)			
Item		PU	Order number
64A	Sash part	100	9-40564-00-0-1

Centre-closer, concealed			
Item		PU	Order number
64C	Frame part	100	profile-specific

Turn-Only centre rebate-hinge (with compensation)				
Item	AX	OL	PU	Order number
62A	9	18	100	6-36841-18-0-1
		20		6-36841-20-0-1
	13	18		6-36842-18-0-1
		20		6-36842-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

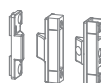
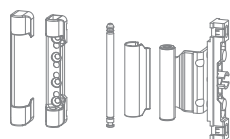
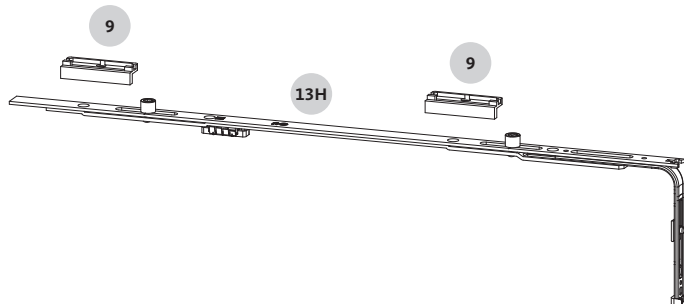
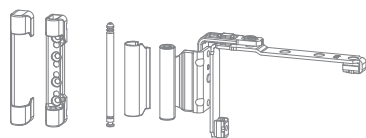
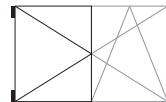
Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Please note: List of abbreviations see page 87

Please note: List of abbreviations see page 87

EURO-JET ZH lever-operated gear – dummy-mullion sash – central locking system

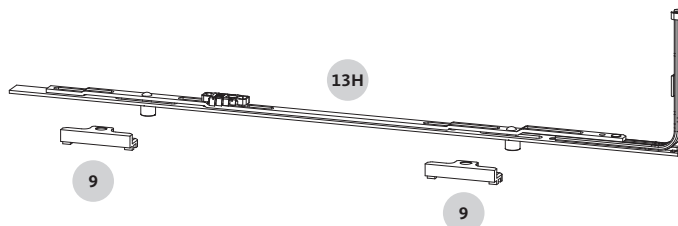
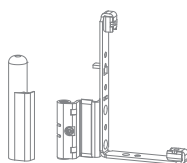
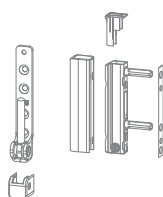
2-sashed, 9 mm and 13 mm axis



4D

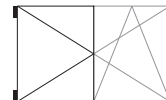
6

24



EURO-JET ZH lever-operated gear – dummy-mullion sash – central locking system

2-sashed, 9 mm and 13 mm axis



Gear connector 90° – top

Item	SRH	Length	LC	PU	Order number
4D	741 – 2450	160	1	10	6-32303-00-0-1

Rod guide

Item		PU	Order number
6	Quantity as required [1]	100	8-00805-00-0-0

ZH lever-operated gear, fixed handle height

Lever height, dim. HH				
Item	SRH	Lever height, dim. HH	PU	Order number
24	470 – 720	230	10	G-22160-00-0-1
	721 – 850			G-22161-00-0-1
	851 – 1100			G-22162-00-0-1
	1101 – 1350			G-22163-00-0-1
	1351 – 1600			G-22164-00-0-1
	1601 – 1850			G-22165-00-0-1
	1851 – 2100	516		G-22166-00-0-1
	2101 – 2350			G-22167-00-0-1

Standard striker (zamak)

Item		PU	Order number
9	see from page 46	100	profile-specific

Centre-lock (horizontal at top and bottom)

Centre lock (horizontal at top and bottom)					
Item	SRW	Length	LC	PU	Order number
13H	– 750	215	1	10	6-32010-00-0-1
	751–1350	530	2		6-35596-05-0-1
	1351–1600	740			6-35596-07-0-1

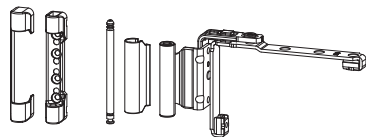
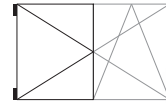
Please note: List of abbreviations see page 87

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

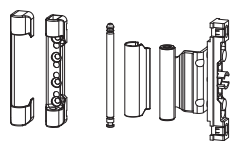
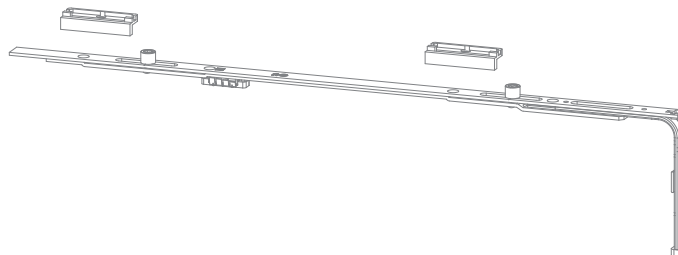
[1] When cropping the faceplate by less than 150 mm or when the notches are still visible after cropping, rod guide 8-00805 should be positioned at least 65 mm from the faceplate end.

EURO-JET ZH lever-operated gear – dummy-mullion sash – hinge-side

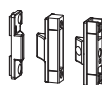
2-sashed, 9 mm and 13 mm axis



81A 51A 53 80A 61J



81A 51A 53 80A 62A



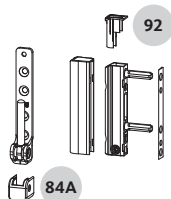
64C 64A 64B

Application range

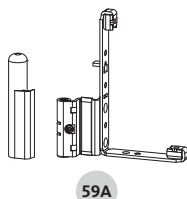
- Tested hardware load-bearing capacity max. 100 kg (see application diagram 0-45919)
- SRW max. = 1600 mm; SRH 470 – 2350 mm

Installation drawings

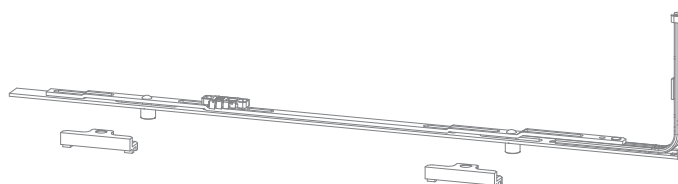
- Central locking system 0-46572 and 0-44866
- Hinge-side 0-46740



54A 82B 56A 90A

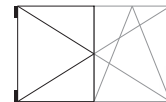


59A



EURO-JET ZH lever-operated gear – dummy-mullion sash – hinge-side

2-sashed, 9 mm and 13 mm axis



Upper hinge-side

Turn-Only hinge, AX 9 mm			
Item	OL	PU	Order number
61J	18	50	6-39147-18-0-1
	20		6-39147-20-0-1
Turn-Only hinge, AX 13 mm			
61J	18	50	6-39148-18-0-1
	20		6-39148-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Lower hinge-side

Packer for drill-in hinge				
Item	Pitch	Colour	PU	Order number
90A	6°	dark brown UC 5	100	9-48684-06-0-5
		traffic white (RAL 9016)		9-48684-06-0-7
Plug				
Item			PU	Order number
92			100	9-47426-00-0-1
Drill-in hinge D/100 – without turn-brake				
Item			PU	Order number
56A	for PVC profile, positioning pin Ø 6, L = 23 mm		100	6-36180-01-0-1
Cover cap for drill-in hinge				
Item	Colours			
82B	see from page 41			
ALU 16 rebate corner-hinge				
Item			PU	Order number
59A	for aluminium profile with 16 mm sash groove, cover cap see page 40		100	6-37455-**-L/R-*
Pivot-rest D/100				
Item			PU	Order number
54A	Positioning pin Ø 3, L = 2.5 mm		100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm			6-36882-22-0-1
Cover cap for pivot-rest				
Item	Colours			
84A	see from page 41			

Centre hinge-side

Centre-closer, concealed (adjustable)			
Item		PU	Order number
64B	Sash part	100	6-34229-00-0-1

Centre-closer, concealed (not adjustable)			
Item		PU	Order number
64A	Sash part	100	9-40564-00-0-1

Centre-closer, concealed			
Item		PU	Order number
64C	Frame part	100	profile-specific

Turn-Only centre rebate-hinge (with compensation)				
Item	AX	OL	PU	Order number
62A	9	18	100	6-36841-18-0-1
		20		6-36841-20-0-1
	13	18		6-36842-18-0-1
		20		6-36842-20-0-1

Cover cap for stay-hinge	
Item	Colours
80A	see from page 41

Stay-bearing pin			
Item		PU	Order number
53		100	9-48898-00-0-1

Stay-bearing D/100			
Item		PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

Cover cap for stay-bearing	
Item	Colours
81A	see from page 41

Please note: List of abbreviations see page 87.

Please note: List of abbreviations see page 87





3.0 Hinge-side accessories

For PVC and aluminium windows	
Stay-bearing, stay-bearing pin	38
Pivot-rest	39
For aluminium windows with 16 mm sash groove	
Rebate corner-hinge, cover caps	40
For PVC and aluminium windows	
Cover caps	41 – 42

EURO-JET – hinge-side accessories

Stay-bearing, stay-bearing pin



Stay-bearing D/100			
Item	Description	PU	Order number
51A	Positioning pin Ø 3, L = 2.5 mm	100	6-36026-03-0-1
	Positioning pin Ø 6, L = 2.5 mm		6-36026-06-0-1

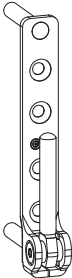


Stay-bearing pin			
Item	Description	PU	Order number
53		100	9-48898-00-0-1

A stay-bearing pin must be ordered separately with every stay-bearing.

EURO-JET – hinge-side accessories

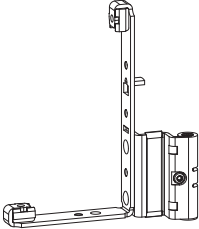
Pivot-rest



Pivot-rest D/100			
Item	Description	PU	Order number
54A	Positioning pin Ø 3, L = 2.5 mm	100	6-36881-03-0-1
	Positioning pin Ø 6, L = 22 mm		6-36882-22-0-1

EURO-JET – hinge-side accessories

Rebate corner-hinge, cover caps

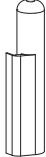




Rebate corner-hinge D/100 – without overlap screw-fixing, with turn-brake

Item	Description	PU	Order number
59A	Size 18 / AX 9	50	6-37455-18-L/R-1
	Size 18 / AX 13		6-37456-18-L/R-1
	Size 20 / AX 9		6-37455-20-L/R-1
	Size 20 / AX 13		6-37456-20-L/R-1

- Adjustable concealed turn-brake prevents the sash from closing of its own accord (also with slight air draughts)



Cover cap for rebate corner-hinge/corner-drive rebate-hinge without overlap screw-fixing, with turn-brake

Colours	GU internal ref.	Info	Order number
Silver	1N (painted)	EV1	9-40487-00-L/R-1
Brass colour	3N (painted)	Brass colour	9-40487-00-L/R-3N
Medium bronze	4N (painted)	UC3	9-40487-00-L/R-4
Dark brown	5X (coloured)	UC5	9-40487-00-L/R-5
Traffic white	7X (coloured)	RAL 9016	9-40487-00-L/R-7

- This cover is equipped with a long nose piece covering the visible area between the overlap and rebate corner-hinge
- Compatible with
 - Rebate corner-hinge 6-37455-□□, 6-37456-□□ and
 - Corner-drive rebate-hinge 6-39000-□□, 6-39001-□□
- Packaging: 100 pcs cover caps in cardboard box
- More colours are available on request

EURO-JET – hinge-side accessories

Cover caps



Cover cap for stay-hinge

Colours	GU internal ref.	Info	PU	Order number
Silver	1N (painted)	EV1	100	9-47795-01-0-1
Brass colour	3N (painted)	Brass colour	100	9-47795-01-0-3N
Medium bronze	4N (painted)	UC3	100	9-47795-01-0-4
Dark brown	5X (coloured)	UC5	100	9-47795-01-0-5
Traffic white	7X (coloured)	RAL 9016	100	9-47795-01-0-7



Cover cap for stay-bearing

Colours	GU internal ref.	Info	PU	Order number
Silver	1N (painted)	EV1	100	9-47334-01-0-1
Brass colour	3N (painted)	Brass colour	100	9-47334-01-0-3N
Medium bronze	4N (painted)	UC3	100	9-47334-01-0-4
Dark brown	5X (coloured)	UC5	100	9-47334-01-0-5
Traffic white	7X (coloured)	RAL 9016	100	9-47334-01-0-7



Cover cap for drill-in hinge (only for PVC windows)

Colours	GU internal ref.	Info	PU	Order number
Silver	1N (painted)	EV1	100	9-47783-01-0-1
Brass colour	3N (painted)	Brass colour	100	9-47783-01-0-3N
Medium bronze	4N (painted)	UC3	100	9-47783-01-0-4
Dark brown	5X (coloured)	UC5	100	9-47783-01-0-5
Traffic white	7X (coloured)	RAL 9016	100	9-47783-01-0-7



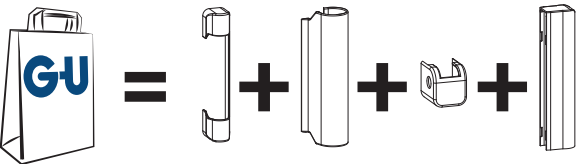
Cover cap for pivot-rest D/100

Colours	GU internal ref.	Info	PU	Order number
Silver	1N (painted)	EV1	100	9-42683-00-0-1
Brass colour	3N (painted)	Brass colour	100	9-42683-00-0-3N
Medium bronze	4N (painted)	UC3	100	9-42683-00-0-4
Dark brown	5X (coloured)	UC5	100	9-42683-00-0-5
Traffic white	7X (coloured)	RAL 9016	100	9-42683-00-0-7

- Packaging: 100 pcs cover caps in cardboard box
- More colours are available on request

EURO-JET – hinge-side accessories

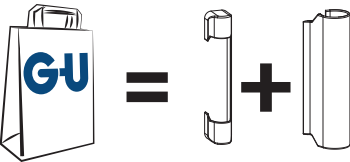
Cover caps



- 1 set of cover-caps in poly-bag:
 - 1 pc 9-47334-01-0-* (cover cap for stay-bearing)
 - 1 pc 9-47795-01-0-* (cover cap for stay-hinge)
 - 1 pc 9-42683-00-0-* (cover cap for pivot-rest)
 - 1 pc 9-47783-01-0-* (cover cap for drill-in hinge)
- More colours are available on request
- Packaging: 1 set of cover caps in poly-bag, 100 poly-bags in one cardboard (=400 cover caps)

Cover caps set for drill-in hinge without turn-brake

Colours	GU internal ref.	Info	PU	Order number
Silver	1N (painted)	EV1	100	K-18675-00-0-1
Brass colour	3N (painted)	Brass colour	100	K-18675-00-0-3N
Medium bronze	4N (painted)	UC3	100	K-18675-00-0-4
Dark brown	5X (coloured)	UC5	100	K-18675-00-0-5
Traffic white	7X (coloured)	RAL 9016	100	K-18675-00-0-7



- 1 set of cover-caps in poly-bag:
 - 1 pc 9-47334-01-0-* (cover cap for stay-bearing)
 - 1 pc 9-47795-01-0-* (cover cap for stay-hinge)
- More colours are available on request
- Packaging: 1 set of cover caps in poly-bag, 100 poly-bags in one cardboard (=200 cover caps)

Cover caps set for Turn-Only centre rebate-hinge

Colours	GU internal ref.	Info	PU	Order number
Silver	1N (painted)	EV1	100	K-18680-00-0-1
Brass colour	3N (painted)	Brass colour	100	K-18680-00-0-3N
Medium bronze	4N (painted)	UC3	100	K-18680-00-0-4
Dark brown	5X (coloured)	UC5	100	K-18680-00-0-5
Traffic white	7X (coloured)	RAL 9016	100	K-18680-00-0-7







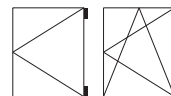
4.0 Frame components

4.1 Frame components for PVC windows	46 – 52
--------------------------------------	---------

4.2 Frame components for aluminium windows	53
--	----

Frame components for PVC windows

for 1-sashed windows and balcony-doors

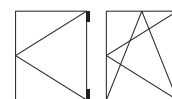


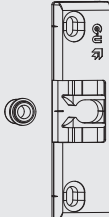
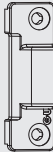
Profile system PVC window	Sash profile	Frame profile	Dummy-mullion profile	Axis mm	Overlap mm/°pitch	T&T striker (side-tilter) PU = 100	Standard striker PU = 100	Bullet-catch* PU = 100	Packer PU = 100	Run-up stop for sash lifter PU = 100	Centre-closer (frame part) PU = 100	
Accord												
Accord Contour 7.0 MD	A.FL 02	A.RA 01	A.ST 01	13.0	20/0°		9-38620-00-0-1	K-17118-00-0-1		9-40472-00-0-1	9-40866-00-0-1	
Acome												
Acome Crescendo				13.0	-/-							
Actual												
Actual A 600				13.0	-/0°	9-39728-00-L/R-1	9-39614-00-0-1					
Alphacan												
Alphacan Alpha 70-80	63 720	62 700		13.0	20/0°		9-42972-00-0-1	K-17118-00-0-1		9-40465-00-0-1	9-40866-00-0-1	
Alphacan Class	MB 00 G	MT 00 B	MS 75 B	13.0	20/0°	9-41978-00-L/R-1	9-41977-00-0-1				9-40565-12-0-1	
Alphacan Esthea	53-05	53-45		12.9	20/0°	E-18111-00-0-1	E-18104-00-0-1					
Alphacan Fersina Diplomat	ZOMI	ELMI	DUEB	9.1	21/0°	8-00940-00-0-0	9-36886-00-0-1			9-40460-00-0-1	9-40871-01-0-1	
Alphacan Fersina Master	ZOM	ELA	TAO 00	9.4	21.7/0°							
Alphacan Profilia 600	PF 096	PF 090		9.0	20/0°	8-00946-00-0-0	9-30146-06-0-1					
Alphacan Profilia MD 600	PE 611	PE 602		13.0	20/0°	9-38231-00-0-0	9-38115-00-0-1			9-40461-00-0-1	9-40565-05-0-1	
Aluplast												
Aluplast energeto 4000	140086	40007		13.0	19/0°	E-19223-00-L/R-1	9-38218-00-0-1	K-17139-00-0-1		9-40065-00-0-1	9-40866-00-0-1	
Aluplast energeto 5000	50083	50003			24/0°		9-38218-00-0-1					
Aluplast energeto 8000	80086	80005					9-38218-00-0-1					
Aluplast Ideal 1000	100x22	100x01			120205	20/5°	9-36531-00-L/R-1	9-34907-00-0-1	K-17118-00-0-1 K-17747-00-0-1			9-40066-00-0-1
Aluplast Ideal 2000	120022	120002			120204							
Aluplast Ideal 4000	140025	140002	140066	9.0	20/0°	E-19223-00-L/R-1	9-38218-00-0-1	K-17139-00-0-1		9-40066-00-0-1	9-40866-00-0-1	
Aluplast Ideal 5000	150025	150002	140250									
Aluplast Ideal 6000		160003										
Aluplast Ideal 7000	170007	140020										
Aluplast Ideal 8000	180x83	180x03										
Aluplast Signum 21	70	71	4143	9.0		8-00950-00-0-1	9-30146-04-0-1			9-40463-00-0-1	9-40565-07-0-1	
Aluplast Signum 25	2539	2534	2550	13.0		9-35772-00-0-1	9-35770-00-0-1	K-17747-00-0-1			9-40565-10-0-1	
Aluplast Signum 26	2610	2601	2630			9-37325-00-L/R-1	9-34907-00-0-1					
Asapen												
Asapen 70 mm	7053	7052	7059	13.0	20/0°	9-36531-00-L/R-1	9-42972-00-0-1	K-17118-00-0-1		9-40465-00-0-1	9-40866-00-0-1	
Atrya												
Atrya (Tryba) E 58	Z 74	L 65	T 32	9.0	20/5°	E-16073-00-0-1	E-16069-00-0-1				9-40465-00-0-1	
Atrya (Tryba) T 58	Z 76 J	L 66/3		13.0		E-18951-00-0-1	E-18949-00-0-1	K-17747-00-0-1				
Atrya (Tryba) T 58/3	Z 76/3	L 66/3		13.1								
Brüggmann												
Brüggmann AD	HP 152	HP 102	HP 350	13.0	20/0°	9-36531-00-L/R-1	9-34907-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40565-02-0-1	
Brüggmann MD	HP 252	HP 202	HP 451									
Deceuninck												
Deceuninck 1800	P 1807	P 1801	P 400	8.7	21/0°	9-35469-00-L/R-1	9-36544-00-0-1	K-17044-00-0-1	9-30084-00-0-1 E-18310-00-0-1			
Deceuninck Mondial	P 2021	P 2000	P 2040	13.0	21/0°	9-35756-00-0-1	9-35737-00-0-1			9-40475-00-0-1	9-40565-03-0-1	
Deceuninck Mondial	P 2105	P 2100	P 2040		21/0°							
Deceuninck Zendow	3052	3001	3077		20/5°							
Deceuninck Zendow Upgrade	4040	4000	4031		20/5°	E-21394-00-0-1	9-35508-00-0-1	K-17118-00-0-1		E-21902-35-0-1	9-40565-06-0-1	
Dimex												
Dimex Komfort				13.0	20/0°	E-19223-00-L/R-1	9-34907-00-0-1	K-17139-00-0-1		9-40473-00-0-1		
Egeplast												
Egeplast				9.0	20/5°	9-34496-01-0-1	E-13534-15-0-1					
Fapes												
Fapes	82	81	85	9.0	22/0°	9-39513-00-L/R-1	9-39511-00-0-1	6-29892-10-0-1		9-40459-00-0-1	9-40871-02-0-1	
Funke												
Funke KS Helios				13.0	20/3°	E-19223-00-L/R-1	9-42972-00-0-1	K-17118-00-0-1		9-40465-00-0-1	9-40866-00-0-1	
Funke KS Phoenix												

* The K-number includes a bullet-catch roller (sash part) with order number 8-00756-00-0-1

Frame components for PVC windows

for 1-sashed windows and balcony-doors

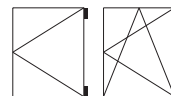


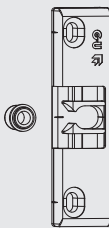
Profile system PVC windows	Sash profile	Frame profile	Dummy mullion profile	Axis mm	Overlap mm/pitch	 T&T striker (side-tilter) PU = 100	 Standard striker PU = 100	 Bullet-catch* PU = 100	 Packer PU = 100	 Run-up stop for sash lifter PU = 100	 Centre-closer (frame part) PU = 100	
Gealan												
Gealan S 3000	3090	3008	3080	13.0	20/0°	9-36089-00-0-1	9-35858-00-0-1	K-17890-00-0-1		9-40468-00-0-1	9-40565-04-0-1	
Gealan S 6000	6093	6008	6051			9-37866-00-L/R-1	9-37885-00-0-1					
Gealan S 7000 IQ	7093	7008	7302			9-36089-00-0-1	9-35858-00-0-1	K-17890-00-0-1		9-40468-00-0-1	9-40565-04-0-1	
Gealan S 8000 IQ	8066	8008	8080									
Gromathic												
Gromathic System AD 3100	GM 3101	GM 3108	GM 3114	9.0	20/0°	9-35923-00-L/R-1	9-34202-00-0-1					
Gromathic System MD 3000	GM 3001	GM 3008	GM 3004	9.0	20/0°							
Hocoplast												
Hocoplast H 120	120-86	100-68	100-42	9.0	20/5°	E-11967-00-0-1	E-11968-00-0-1					
Home												
Home	F 84	B 80		9.0	20/6°	8-00936-00-0-1	9-30146-02-0-1	K-17044-00-0-1	9-30082-00-0-1			
Inoutic												
Inoutic AD	Z 10	L 10		13.0	21/0°	9-35466-00-0-1	9-34492-00-0-1	K-17044-00-0-1	9-30081-00-0-1	9-40467-00-0-1	9-40565-09-0-1	
Inoutic Delux	Z 710			13.0	-/-							
Inoutic Elite	Z 710	L 710		13.0	20/0°		9-34492-00-0-1			9-30081-00-0-1	9-40467-00-0-1	9-40565-09-0-1
Inoutic MD	ZM 1-4	LM 10		9.0	21/0°		9-31755-00-0-1					
Inoutic MD 100	ZM 200	LM 200		13.0	9-35466-00-0-1	9-34492-00-0-1	K-17044-00-0-1	9-30081-00-0-1		9-40565-09-0-1		
Inoutic MD 100	ZM 100	LM 100		13.0		21/0°	9-34492-00-0-1	K-17044-00-0-1	9-30081-00-0-1		9-40565-09-0-1	
Internova												
Internova 4KS	GF 4022	GR 4000	GS 4050	13.0	20/0°		9-43616-00-0-1	K-17118-00-0-1		9-40465-00-0-1	9-40866-00-0-1	
Internova 6000	GF 6020	GR 6001										
Kompen												
Kompen KOM 900				13.0	-/-	9-36089-00-0-1	9-42972-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1	
Kompen Thermoline KOM 600	KOM 602	KOM 605			20/0°							
LB-Profile												
LB-Profile PCD	CZ2-5	CL2-5		13.0	20/0°	9-36531-00-L/R-1	9-34907-00-0-1					
LB-Profile PCD	CZ2-5	CLM2-5-C										
Oxxo												
Oxxo Evolution				13.0	-/-							
Oxxo Sym					-/-							
Pakpen												
Pakpen				9.0	-/-	9-35923-00-L/R-1						
Pakpen Global Seri				13.0	-/-	9-40329-00-0-1	9-40328-00-0-1					
Pakpen Optimal				13.0	20/0°							
Panorama												
Panorama 3000	3015	3001		13.0	20/0°		9-41591-00-0-1	K-17118-00-0-1		9-40488-00-0-1		
Pimapen												
Pimapen S7500 Fantasia				13.0	20/0°	9-36089-00-0-1	9-42972-00-0-1					
Pimapen S6000				9.0		9-35923-00-L/R-1	9-34202-00-0-1					
Pimapen S6000				13.0		-/-	9-36089-00-0-1					
Plafen												
Plafen E-Line	EZ 60/77	EL 60/66		13.0	20/0°		9-42972-00-0-1					
Plastil												
Plastil Elodie				13.0	-/-	E-21035-03-L/R-1						
Plastival												
Plastival PF 5900	F 001	F 010	F 022	13.0	20/7°	E-18759-00-0-1	E-18736-00-0-1	K-17044-00-0-1	E-18773-00-0-1	E-21902-20-0-1		
Plustec												
Plustec Softline	FR 60 V	BR 66	ST 61	13.0	20/5°	9-38317-00-L/R-1	9-37135-00-0-1	K-17118-00-0-1				
Primo												
Primo 4000	3283	3282		13.0	20/-	E-19223-00-L/R-1	9-34907-00-0-1					
Profel												
Profel	P 602	P 601		9.0	20/0°	8-00961-00-0-1	9-30146-16-0-1					
Profex												
Profex 2000				13.0	-/-	9-35756-00-0-1						

* The K-number includes a bullet-catch roller (sash part) with order number 8-00756-00-0-1

Frame components for PVC windows

for 1-sashed windows and balcony-doors

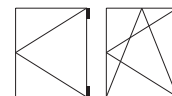


Profile system PVC window	Sash profile	Frame profile	Dummy mullion profile	Axis mm	Overlap mm/pitch						
Profine											
Profine Eurodur 3S	1411	1401	1440	13.0	20/4°	9-33682-00-L/R-1	9-33802-00-0-1	K-17118-00-0-1		9-40457-00-0-1	9-40565-00-0-1
Profine EuroFutur Classic	2411	2401	2441								
Profine EuroFutur Elegance	111	101	141		12.9		9-35832-00-L/R-1	9-35508-00-0-1			
Profine Gold	1463	1461	1440	9.0	20/2.5°	9-35469-00-L/R-1	9-31115-00-0-1	K-17044-00-0-1	9-30084-00-0-1	9-40469-00-0-1	9-40871-04-0-1
Profine KBE 58	318	306	134	13.0	20/0°	9-35832-00-L/R-1	9-35508-00-0-1	K-17118-00-0-1		9-40488-00-0-1	9-40565-06-0-1
Profine KBE 70	375	370	385		20/4°	9-33682-00-L/R-1	9-33802-00-0-1	K-17895-00-0-1		9-40457-00-0-1	9-40565-00-0-1
Profine KBE 70	9375	9370			20/0°	9-36102-00-0-1	9-41716-00-0-1	K-17044-00-0-1	9-30084-00-0-1	9-40476-00-0-1	9-40871-03-0-1
Profine Kömmerling 88+	6211	6201	6306			9-37054-00-L/R-1	9-37137-00-0-1	K-17140-00-0-1		9-40785-00-0-1	9-40565-11-0-1
Profine Trocal 88+	8221	8102	532100		9.0	20/0°	9-36102-00-0-1	9-41716-00-0-1	9-30084-00-0-1	9-40476-00-0-1	9-40871-03-0-1
Profine Trocal 900	920100	910100	935100				9-37054-00-L/R-1	9-37137-00-0-1			
Profine Trocal Confort	120400	111000	130900								
Profine Trocal Innonova 2000	520100	510100	532100	13.0	20/0°	9-37054-00-L/R-1	9-37137-00-0-1	K-17044-00-0-1	9-30084-00-0-1	9-40785-00-0-1	9-40565-11-0-1
Profine Trocal Innonova 70 AD	620600	610100									
Profine Trocal Innonova 70 MD	520600	510300									
Pural											
Pural AD	P 009	P 002	SA/SI	9.0	18/0°	8-00932-00-0-1	9-41261-00-0-1	K-17044-00-0-1	9-41276-00-0-1	9-41277-00-0-1	
Pural MD	P 005	P 010	Z100Z110								
Rehau											
Rehau Brilliant-Design	550 060	550 000		13.0	20/0°	9-35772-00-L/R-1	9-35770-00-0-1	K-17139-00-0-1		9-40463-00-0-1	9-40565-07-0-1
Rehau Clima-Design	555 510	555 500			-/	9-44606-00-L/R-1	9-44525-01-0-1	6-34622-00-0-1		9-44545-00-0-1	9-44549-00-0-1
Rehau Geneo	Z 57	72 AD	60			9-35772-00-L/R-1	9-35770-00-0-1	K-17139-00-0-1		9-40463-00-0-1	9-40565-07-0-1
Rehau Optimum/Platinum				9.0	20/0°	9-35772-00-L/R-1	9-35770-00-0-1	K-17139-00-0-1		9-40463-00-0-1	9-40565-07-0-1
Rehau S 730	541 010	541 060	541 100		18/0°	9-31114-00-L/R-1	E-14339-00-0-1				
Rehau S 780	634 153	634 133	632 913								
Roloplast											
Roloplast 3-K	310	301	321	13.0	20/-		9-42972-00-0-1				
Roloplast 4-K	410	401	421	9.4			9-31115-00-0-1				
Roloplast 6-K	610	601	621	13.0			9-42972-00-0-1				
Roplasto											
Roplasto 6001 Plus S-AD	641300	619003		9.0	20/0°	8-00940-00-0-1	E-15061-00-0-1	K-17044-00-0-1	9-30082-00-0-1		
Roplasto 6001 Plus S-AD	640200	619003					E-13534-10-0-1		9-41625-00-0-1	9-40489-00-0-1	
Roplasto 6001 Plus S-MD	641300	610102	610700								
Roplasto 6001 Plus S-MD	640200	610172		13.0	22/0°	9-35832-00-L/R-1	9-35508-00-0-1	K-17139-00-0-1		9-40488-00-0-1	9-40565-04-0-1
Roplasto 6002	671000	670100	673500								
Roplasto 7001	220204	210804									
Salamander											
Salamander bluEvolution 82 AD / MD				13.0	20/0°	9-36531-00-L/R-1	9-45847-00/01-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1
Salamander bluEvolution	171 020	170 420	176 020	13.0	20/0°	9-37325-00-L/R-1	9-38218-00-0-1	K-17139-00-0-1		9-40466-00-0-1	9-40565-10-0-1
Salamander Design 2D	211 025	210 020	216 020		20/R14		9-38634-00-0-1				
Salamander Design 3D	211 220	110 220	*								
Salamander Design MD	111 026	110 036	116 025	9.0	20/0°			K-17044-00-0-1	9-34861-00-0-1	9-40471-00-0-1	
Salamander Streamline	251 020	250 220									
Salamander Universal	201 020	200 020	206 030								
Salamander Universal	201 030										
Schüco											
Schüco Corona AS 60	8105	8101	8131	13.0	20/0°	E-19223-00-L/R-1	9-38218-00-0-1	K-17139-00-0-1		9-40065-00-0-1	9-40866-00-0-1
Schüco Corona CT 60					-/-						
Schüco Corona CT 70	8586	8597	8574		20/0°	E-19223-01-L/R-1	9-38218-00-0-1	K-17747-00-0-1		9-40066-00-0-1	9-40866-00-0-1
Schüco Corona MD 60	8121	8116	8137			E-19223-00-L/R-1		K-17139-00-0-1			

* The K-number includes a bullet-catch roller (sash part) with order number 8-00756-00-0-1

Frame components for PVC windows

for 1-sashed windows and balcony-doors

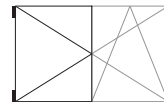


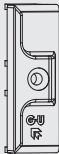
Profile system PVC windows	Sash profile	Frame profile	Dummy mullion profile	Axis mm	Overlap mm/pitch	T&T striker (side-tilter) PU = 100	Standard striker PU = 100	Bullet-catch* PU = 100	Packer PU = 100	Run-up stop for sash lifter PU = 100	Centre-closer (frame part) PU = 100
Sim				13.0	-/-						
Sim Heliance				13.0	-/-						
Socredis				13.0	-/-	E-20597-01-L/R-1					
Socredis S33				13.0	-/-						
Socredis Sybioline				13.0	-/-						
Stöckel				13.0	20/-	9-38677-00-0-1	9-37730-00-0-1				
Stöckel Ecotep	2260	2111		13.0	20/-	9-38677-00-0-1	9-37730-00-0-1				
Technal				9.0	-/-						
Technal Focus				9.0	-/-						
Thermoplast				9.0	20/0°		9-37790-00-0-1				
Thermoplast	AP024	AP021		13.0	20/0°		9-34907-00-0-1				
Toundra				9.0	-/-						
Toundra				9.0	-/-						
Veka				13.0	20/0°						
Veka 70				13.0	20/0°		9-45847-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1
Veka Alaphine 90 MD	103.312	101.236	102.244	13.0	20/0°	9-36531-00-L/R-1	9-45847-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1
Veka Kietis				13.0	20/0°	9-36531-00-L/R-1	9-45847-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1
Veka Softline 70 AD	103.197	101.086	102.196	13.0	20/0°	9-35923-00-L/R-1	9-34202-00-0-1	K-17044-00-0-1	E-20048-09-0-1	9-40464-00-0-1	9-40871-04-0-1
Veka Softline AD	103.105	101.085	102.196	9.0	20/0°	9-35923-00-L/R-1	9-34202-00-0-1	K-17044-00-0-1	E-20048-09-0-1	9-40464-00-0-1	9-40871-04-0-1
Veka Softline AD	103.100	101.086	102.196	9.0	20/0°	9-35923-00-L/R-1	9-34202-00-0-1	K-17044-00-0-1	E-20048-09-0-1	9-40464-00-0-1	9-40871-04-0-1
Veka Softline MD	103.117	101.098	102.196	9.0	20/0°	9-35923-00-L/R-1	9-34202-00-0-1	K-17044-00-0-1	E-20048-09-0-1	9-40464-00-0-1	9-40871-04-0-1
Veka Topline AD	103.200	101.200	102.206	13.0	20/0°	9-36531-00-L/R-1	9-45847-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1
Veka Topline MD	103.220	101.220	102.226	13.0	20/0°	9-36531-00-L/R-1	9-42972-00-0-1	K-17747-00-0-1		9-40465-00-0-1	9-40866-00-0-1
VIVA				13.0	20/0°		9-42972-00-0-1	K-17118-00-0-1		9-40465-00-0-1	9-40866-00-0-1
VIVA-Plast				13.0	20/0°		9-42972-00-0-1	K-17118-00-0-1		9-40465-00-0-1	9-40866-00-0-1
Weltplast				9.0	-/0°	9-29770-00-L/R-1	9-41364-00-0-1	K-17044-00-0-1	9-41595-00-0-1	9-41457-00-0-1	
Weltplast	552000	550000	562000	9.0	-/0°	9-29770-00-L/R-1	9-41364-00-0-1	K-17044-00-0-1	9-41595-00-0-1	9-41457-00-0-1	
Winsa				13.0	20/0°		9-38115-00-0-1				
Winsa	1102	1101	1161	13.0	20/0°		9-38115-00-0-1				
Wymar				13.0	20/0°	9-35756-00-0-1	9-35737-00-0-1	K-17044-00-0-1	E-18310-00-0-1	9-40475-00-0-1	
Wymar 2000	P 2204	P 2008		13.0	20/0°	9-35756-00-0-1	9-35737-00-0-1	K-17044-00-0-1	E-18310-00-0-1	9-40475-00-0-1	
Wymar 2500				13.0	20/0°	9-42686-00-L/R-1	E-19550-32-0-1	K-17118-00-0-1		9-42662-00-0-1	9-40565-04-0-1
Wymar 3000	3200	3000	3300	13.0	20/10°	9-41840-00-0-1	E-19550-62-0-1	K-17118-00-0-1		9-41864-00-0-1	9-41866-00-0-1

* The K-number includes a bullet-catch roller (sash part) with order number 8-00756-00-0-1

Frame components for PVC windows

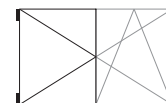
for 2-sashed windows and balcony-doors without mullion



Profile system PVC windows	Sash profile	Frame profile	Dummy mullion profile	Axis mm	Overlap mm/°	Standard striker PU = 100	Dummy-mullion striker (vertical) PU = 100	Packer for lever- operated gear PU = 100	Shoot-bolt top PU = 100	Shoot-bolt bottom PU = 100	Striker 2-leaf PU = 100
											
Accord											
Accord	503002	503001	503228	9.0	19/0°	9-34325-00-0-1	9-30146-01-0-1				
Accord Contour 7.0 MD	A.FL 02	A.RA 03	A.ST 01	13.0	20/0°	9-38620-00-0-1	E-13534-12-0-1				
Actual											
Actual A 600				13.0	-/0°	9-39614-00-0-1					9-36227-00-0-1
Alphacan											
Alphacan Class	MB 00 G	MT 00 B	MS 75 B	13.0	20/0°	9-41977-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	6-32346-00-0-1
Alphacan Fersina Diplomat	ZOMI	ELMI	DUEB	9.1	21/0°	9-36886-00-0-1	9-30146-05-0-1		6-25170-00-0-1	6-25169-00-0-1	6-27837-00-0-1
Alphacan Fersina Master	ZOM 01	ELA 02	TAO 00	9.4	21.7/0°	9-30146-07-0-1	9-30146-05-0-1	9-32035-05-0-1	6-25416-00-0-1	6-25415-00-0-1	6-27837-00-0-1
Aluplast											
Aluplast Ideal 2000	120022	120002	120204	13.0	20/5°	9-34907-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1
Aluplast Ideal 4000	140025	140002	140066			6-22917-00-0-1		6-22916-00-0-1	9-36227-00-0-1		
Aluplast Ideal 5000	140020	140001	140250	9.0	20/0°	9-38634-00-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1	
Aluplast Signum 21	70	71	4143			9-30146-04-0-1	9-43809-00-0-1	6-22917-00-0-1	6-22916-00-0-1	8-00668-26-0-1	
Aluplast Signum 25	2539	2534	2550			9-35770-00-0-1		6-22917-00-0-1	6-22916-00-0-1	9-35774-00-0-1	
Aluplast Signum 26	2610	2601	2630	13.0		9-34907-00-0-1	E-13534-12-0-1	6-22917-00-0-1	6-22916-00-0-1	9-37907-00-0-1	
Atrya											
Atrya (Tryba) E 58	Z 74	L 65	T 32	9.0	20/5°	E-16069-00-0-1	9-43809-00-0-1				
Atrya (Tryba) T 58	AZ 76	L 65		13.0		E-18949-00-0-1			6-22917-00-0-1	6-22916-00-0-1	E-18950-00-0-1
Atrya (Tryba) T 62	BS 100	NS 100	MC 100	9.0		E-16237-00-0-1		E-16237-00-0-1	6-25170-00-0-1	6-25169-00-0-1	E-14591-00-0-1
Brüggmann											
Brüggmann 81	HF 410	HF 431	HF 438	9.0	20/0°	9-32616-00-0-1	9-30735-00-0-1				
Brüggmann AD	HP 152	HP 102	HP 350	13.0		9-34907-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1
Brüggmann Euro 92	HF 952	HF 941	ZF 983	9.0		9-35745-00-0-1	9-35745-00-0-1				
Brüggmann MD	HP 252	HP 202	HP 451	13.0		9-34907-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1
Deceuninck											
Deceuninck 1800	P 1806	P 1801	P 400	8.7	21/0°	9-36544-00-0-1	E-13534-12-0-1				
Deceuninck Mondial	P 2020	P 2000	P 2040	13.0		9-35737-00-0-1			6-22917-00-0-1	6-22916-00-0-1	9-35741-00-0-1
Deceuninck Mondial	P 2105	P 2100	P 2045					6-22917-00-0-1	6-22916-00-0-1	9-35741-00-0-1	
Dimex											
Dimex Komfort				13.0	20/0°	9-34907-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	E-19222-00-0-1
Dimex Super	7750		8510	9.0		9-34202-00-0-1	9-30627-00-0-1		9-35847-00-9-1	9-35848-00-9-1	8-00668-20-0-1
Dongsan											
Dongsan (Korea)	1616	1604	1640	13.0	20/-	9-33802-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-35251-10-0-1
Edil											
Edil Oslo	P 1579	P 1590	P 1584	13.0	20/0°	9-38307-00-0-1	E-13534-12-0-1				
Edil Plastix	P 1472	P 1470	P 1180			9-30146-03-0-1	9-30146-03-0-1				
Edil Plastix	P 1576	P 1580	P 1684								
Egeprofil											
Egeprofil Turkey				9.0	21/5°	9-33271-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	8-00668-11-0-1
Europlast											
Europlast 7000	R 7011	R 7001		9.0	21.2/5°	9-30146-09-0-1	9-30146-09-0-1				
Fapes											
Fapes	82	81	85	9.0	22/0°	9-39511-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	6-30053-00-0-1
Gealan											
Gealan S 3000	3090	3008	3080	13.0	20/0°	9-35858-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	8-00668-19-0-1
Gealan S 3000	3090		3301				9-35858-00-0-1				
Gealan S 6000	6093	6008	6051			9-37885-00-0-1	E-13534-12-0-1				
Gealan S 7000 IQ	7093	7008	7302						6-22917-00-0-1	6-22916-00-0-1	8-00668-19-0-1
Gealan S 7000 IQ	7093		7303			9-35858-00-0-1	E-13534-12-0-1				
Gealan S 8000	8066		8080						6-22917-00-0-1	6-22916-00-0-1	8-00668-19-0-1
Gromathic											
Gromathic System AD 3100	GM 3101	GM 3108	GM 3114	9.0	20/0°	9-34202-00-0-1		9-32035-03-0-1	6-24682-00-0-1	6-24681-00-0-1	8-00668-10-0-1
Gromathic System MD 3000	GM 3001	GM 3008	GM 3004					9-34202-00-0-1		6-24387-00-0-1	6-24387-00-0-1
Helmitin											
Helmitin KS	4-60115	4-60111	4-60124	12.3	20/0°	9-35714-00-0-1	9-35714-00-0-1	9-32035-05-0-1			
Helmitin KSL	4-60185	4-60180	4-60201				E-13534-12-0-1				
Hocoplast											
Hocoplast H 120	120-86	100-68	100-42	9.0	20/5°	E-11968-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	8-00668-22-0-1

Frame components for PVC windows

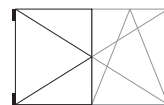
for 2-sashed windows and balcony-doors without mullion



Profile system PVC window	Sash profile	Frame profile	Dummy mullion profile	Axis mm	Overlap mm/°	Standard striker PU = 100	Dummy-mullion striker (vertical) PU = 100	Packer for lever- operated gear PU = 100	Shoot-bolt top PU = 100	Shoot-bolt bottom PU = 100	Striker 2-sashed PU = 100		
Inoutic													
Inoutic AD	Z 10	L 10	SFZ 10	13.0	21/0°	9-34492-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-38052-00-0-1		
Inoutic MD	ZM 1	LM 10	SFM 1	9.0		9-31755-00-0-1			6-22917-00-0-1	6-22916-00-0-1	8-00668-17-0-1		
Internorm													
Internorm	IF	LS		9.0	20/0°	9-30146-01-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1			
Intertec													
Intertec (Greiner)	GF 1020	GR 1001	GS 1050	9.0	20/0°	E-14339-00-0-1	E-14339-00-0-1				8-00668-22-0-1		
Intertec WD 70 (Greiner)	140001	140020	140050	13.0	20/0°	9-38634-00-0-1	E-13534-12-0-1				6-22917-00-0-1	6-22916-00-0-1	9-38635-00-0-1
Ital													
Ital Plastick	07073ZE	07073EL	07073TC	10.0	20/0°	9-30146-04-0-1	9-30146-04-0-1		6-25416-00-0-1	6-25415-00-0-1	8-00668-04-0-1		
LB-Profile													
LB-Profile PAD	AZ 2-3	AL 1-3	MSZ-10	13.0	20/0°	9-34907-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1		
Milani													
Milani Resine-Plastalum 100	SER 125	SER 126	SER 149	13.0	20/0°	9-30146-03-0-1	9-30146-03-0-1						
Plastival													
Plastival PF 5900	F 001	F 010	F 022	13.0	20/7°	E-18736-00-0-1	E-18108-00-0-1		6-22917-00-0-1	6-22916-00-0-1	E-18737-00-0-1		
Plastmo													
Plastmo (DK)	6035040	6035025	6035085	9.0	20/0°	9-34202-00-0-1	9-34202-00-0-1	9-32035-03-0-1					
Plustec													
Plustec	FLR 70	BLR 80C	ST 61	13.0	20/5°	9-30146-01-0-1	9-30146-01-0-1						
Plustec 3K-System AD	FR 60 V	BR 66	ST 61			9-37135-00-0-1	9-38319-00-0-1						
Plustec 3K-System AD	FR 60 V	BR 66	ST 44				E-13534-12-0-1						
Primo													
Primo 400 series	P 2379	P 2297	P 1899	9.0	20/12°	9-36878-00-0-1	9-36878-00-0-1		6-25416-00-0-1	6-25415-00-0-1	8-00668-17-0-1		
Profine													
Profine Dina (Spain)	1753	1750	1755	12,9	20/4°	9-33802-00-0-1	8-00975-00-0-1		6-26071-01-0-1	6-24387-01-0-1	9-35251-10-0-1		
Profine Eurodur 3S	1411	1401	1440	13.0					9-32275-00-0-1	6-26071-01-0-1	6-24387-01-0-1	9-35251-10-0-1	
Profine Eurodur 3S			1441	12.9					8-00975-00-0-1	6-26071-01-0-1	6-24387-01-0-1	9-35251-10-0-1	
Profine Eurodur 3S			SP 1108						9-32275-00-0-1				
Profine Eurodur 3S			1565						9-34451-00-0-1				
Profine Eurodur 3S									E-13534-12-0-1				
Profine EuroFutur Classic	2411	2401	2441	13.0						9-30748-05-0-1	6-22917-00-0-1	6-22916-00-0-1	9-35251-10-0-1
Profine EuroFutur Elegance	111	101	141							6-22917-00-0-1	6-22916-00-0-1	9-35251-10-0-1	
Profine Gold	1463	1461	1440							9-35508-00-0-1	9-30146-11-0-1	6-26071-01-0-1	6-24387-01-0-1
Profine Gold auswärts	1482		1441	12.9									
Profine Innovova 2000	520100	510100	532100	13.0	20/0°	9-41716-00-0-1	E-13534-12-0-1	9-32035-04-0-1					
Profine KBE 58	318	306	134	9.0	20/2.5°	9-31115-00-0-1	9-31115-00-0-1		6-22917-00-0-1	6-22916-00-0-1	8-00668-16-0-1		
Profine KBE 58			734										
Profine KBE 58			134 new				20/4°		E-13534-12-0-1				
Profine KBE 58			133						9-33663-00-0-1				
Profine KBE 58	731	9-43809-00-0-1											
Profine KBE 70	375	370	385	13.0	20/0°	9-35508-00-0-1	E-13534-12-0-1						
Profine Tritec	P 1472	P 1320	P 1659	8.0			E-15321-00-0-1						
Profine Trocal 900	920600	910100	935100	9.0			9-30806-00-0-1		9-30806-00-0-1				
Profine Trocal 900	920100		935300						9-43809-00-0-1				
Profine Trocal Confort	120400	111000	130900	13.0			9-37137-00-0-1		E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-37363-00-0-1

Frame components for PVC windows

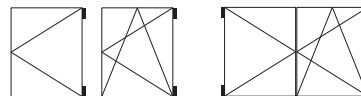
for 2-sashed windows and balcony-doors without mullion



Profile system PVC window	Sash profile	Frame profile	Dummy mullion profile	Axis mm	Overlap mm/°	Standard striker PU = 100	Dummy-mullion striker (vertical) PU = 100	Packer for lever- operated gear PU = 100	Shoot-bolt top PU = 100	Shoot-bolt bottom PU = 100	Striker 2-leaf PU = 100
											
Pural											
Pural	P 005	P 001	SA/SI	9,0	18/0°	9-30146-11-0-1	E-13534-12-0-1				
Ramplast											
Ramplast Ecotherm	302-01	301-01	304-01	9,0	20/0°	9-31115-00-0-1	E-13534-12-0-1				
Rehau											
Rehau Geneo	Z 57	72 AD		13,0	25/0°	9-44525-01-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	6-34396-00-0-1
Rehau S 711	551 020	551 150	551 050	9,0	20/0°	E-13685-00-0-1	E-13685-00-0-1				
Rehau S 730	541 010	541 060	541 100	13,0		9-35770-00-0-1	E-13534-12-0-1				
Rehau S 780	634 153	634 133	632 913	9,0	18/0°	E-14339-00-0-1	E-14339-00-0-1				
Roplasto											
Roplasto 6001 Plus S-MD	641300	610102	610700	9,0	20/0°	E-13534-10-0-1	E-13534-10-0-1				
Salamander											
Salamander bluEvolution 82 AD / MD				13,0	20/0°	9-45847-00/01-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1
Salamander bluEvolution	171 020	170 420	176 020			9-38218-00-0-1		6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1	
Salamander Design 2D	211 025	210 020	216 020		20/R14	9-38634-00-0-1		6-22917-00-0-1	6-22916-00-0-1	9-39613-00-0-1	
Salamander Design 3D	211 220	110 220						6-22917-00-0-1	6-22916-00-0-1	9-39613-00-0-1	
Salamander Design MD	111 026	110 036	116 025	9,0	20/0°	6-22917-00-0-1	6-22916-00-0-1	9-39613-00-0-1			
Salamander Streamline	251 020	250 220				6-22917-00-0-1	6-22916-00-0-1	9-39613-00-0-1			
Salamander Universal	201 020	200 020	206 030		9-31750-00-0-1	9-30146-01-0-1	9-32035-03-0-1				
Salamander Universal			206 022			E-13534-12-0-1					
Schüco											
Schüco AS	700100	702100	718400	8,2	20/5°	9-30627-00-0-1	9-30627-00-0-1				
Schüco Corona AS 60	8105	8101	8131	13,0	20/0°	9-38218-00-0-1	E-13534-12-0-1	6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1	
Schüco Corona CT 70	8586	8597	8574								
Schüco Corona MD 60	8121	8116	8137					6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1	
Schüco M+A	717903	726703	718303	8,2	20/5°	9-30627-00-0-1	9-30748-03-0-1				
Schüco MF	717800	717600	718200	9,0							
Soprofen											
Soprofen Serie T 62	BM 100	NS 100	ME 200	9,0	18/0°	E-16237-00-0-1	E-13534-12-0-1				
Spectus											
Spectus Windows	SW 09	SW 05	SW 51	9,0	20/15°	9-30146-05-0-1	9-30146-05-0-1		6-25416-00-0-1	6-25415-00-0-1	E-13035-00-0-1
Technoplast											
Technoplast				13,0	20/0°	9-34542-00-0-1	9-34542-00-0-1		6-22917-00-0-1	6-22916-00-0-1	E-11575-00-0-1
Veka											
Veka Artline	103.210	101.210	102.211		20/0°	9-38250-00-0-1	9-43809-00-0-1				
Veka Compact				9,0		E-18979-00-0-1					
Veka Contour								6-22917-00-0-1	6-22916-00-0-1	E-19551-32-0-1	
Veka Softline AD	103.197	101.086	102.196	13,0	20/0°	9-42972-00-0-1	E-13534-12-0-1				
Veka Softline AD	103.104		102.086			9-34202-00-0-1					
Veka Softline AD	103.102	101.085	102.118	9,0		9-34202-00-0-1	E-13534-12-0-1				
Veka Softline MD	103.116	101.098	102.106				9-30146-11-0-1	6-26071-01-0-1	6-24387-01-0-1	6-27092-00-0-1	
Veka Topline AD	103.200	101.200	102.206	13,0		9-42972-00-0-1	E-13534-12-0-1	6-22917-00-0-1	6-22916-00-0-1	9-36227-00-0-1	
Veka Topline MD	103.220	101.220	102.226								
Weltplast											
Weltplast	552000	550000	562000	9,0	-/0°	9-41364-00-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	9-41456-00-0-1
Wymar											
Wymar 2500	3200	3000	3300	13,0	20/0°	E-19550-32-0-1	E-13534-12-0-1		6-22917-00-0-1	6-22916-00-0-1	E-19551-32-0-1
Wymar 3000					20/10°	9-41839-00-0-1			6-22917-00-0-1	6-22916-00-0-1	E-19551-16-0-1

Frame components for aluminium windows with 16 mm sash groove

Strikers for 1- and 2-sashed windows and balcony-doors



Strikers for 1- and 2-sashed windows and balcony-doors				
	1			
	2			
Frame groove	Axis	Standard striker (zamak) For screwing	T&T striker (zamak) Side-tilting function For screwing	Standard striker (zamak) for dummy-mullion profiles with 16 mm hardware groove For screwing
14/18	9	1 9-45219-14-0-1 (B = 4.0) 9-45219-15-0-1 (B = 3.5)	9-41778-00-0-1	E-13534-12-0-1
14/18	13	2 E-19550-05-0-1 (L = 43)	-	E-13534-12-0-1
				G-19658-03-0-1



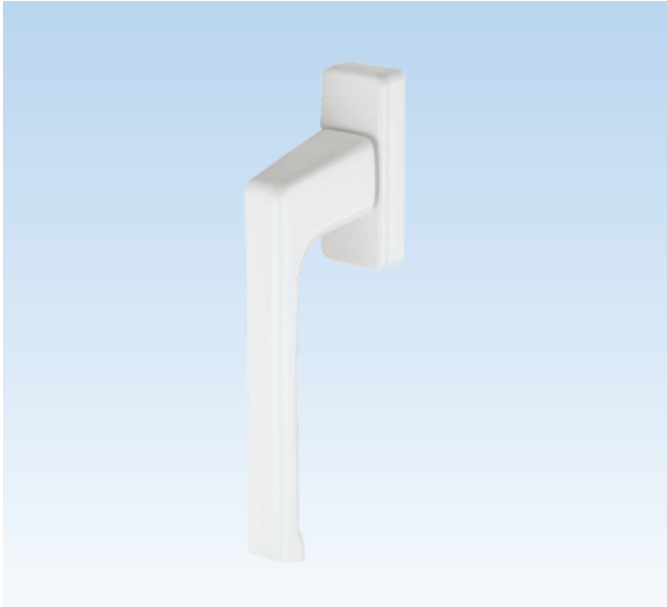
Table of contents



5.0 Window handles

DIRIGENT	56 – 59
ADAGIO	60 – 63
MODENA	64 – 65
SOPRANO	66 – 67
SAN REMO	68
BELCANTO	69
RONDO	70
TREMOLO	71
Accessories for handles	72 – 74

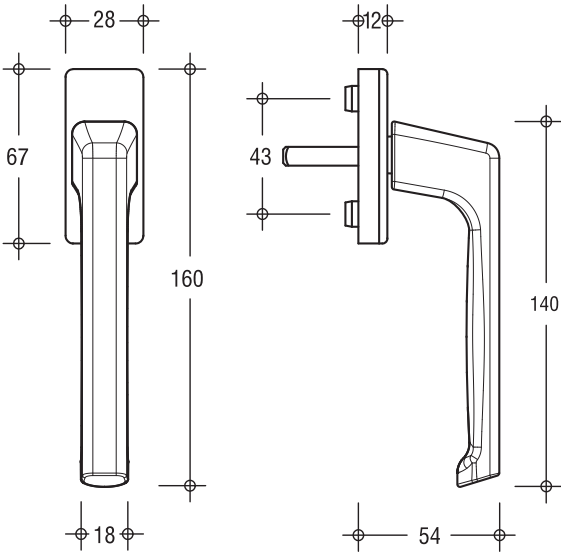
DIRIGENT



DIRIGENT turn handles are bound to impress with their bold shape and clean lines. Elegance and functionality are the main design features of the DIRIGENT design.

Product range: aluminium interior and exterior handles for timber, PVC and metal windows and balcony-doors.

Technical data	
Description	Data
Inside rosette	28 x 67 mm
Detent	90° or 90° and 45° with F/SP
Lug	Ø 10 mm
Length of lug	5 mm
Square spindle	fastened, 7 x 29, 7 x 33, 7 x 38 or 7 x 43 mm
Locking system	F/Z keyed alike
Rosette cover	pivotable
Fixing	concealed



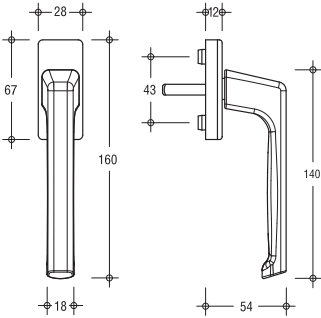
DIRIGENT-F, DIRIGENT-F/SP

Order example

Colour 1 (silver), 5 (brown) or 7 (white)

6-28072-25-0-□

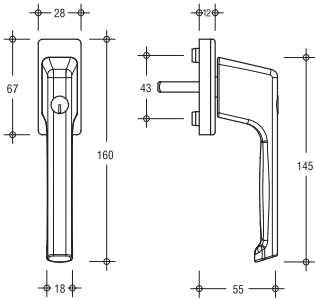
DIRIGENT



DIRIGENT-F [1]

Version	PU	Order number
25 mm square spindle, inside	20	6-28072-25-0-□
29 mm square spindle, inside	20	6-28072-29-0-□
33 mm square spindle, inside	20	6-28072-33-0-□
38 mm square spindle, inside	20	6-28072-38-0-□
43 mm square spindle, inside	20	6-28072-43-0-□

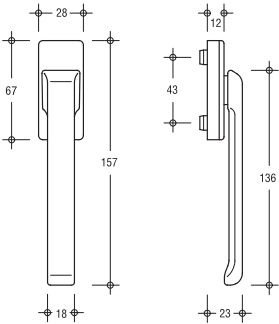
[1] also w/o spindle



DIRIGENT-F/Z [1]

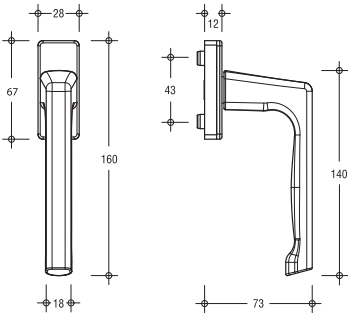
Version	PU	Order number
29 mm square spindle, inside, with push lock	20	6-28075-29-0-□
33 mm square spindle, inside, with push lock	20	6-28075-33-0-□
38 mm square spindle, inside, with push lock	20	6-28075-38-0-□

[1] also w/o spindle



DIRIGENT-F/F

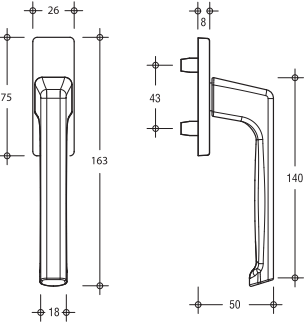
Version	PU	Order number
Inside, flat	20	6-28101-00-0-□



DIRIGENT-F/H

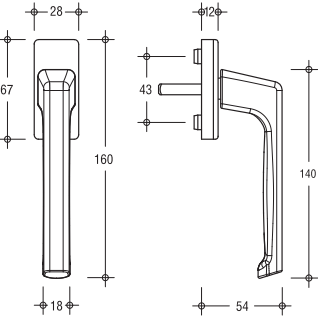
Version	PU	Order number
Inside, high	20	6-28102-00-0-□

DIRIGENT



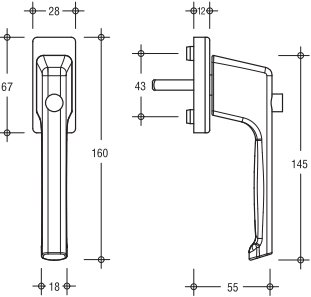
DIRIGENT-F/A

Version	PU	Order number
Outside	20	6-25993-00-0-□



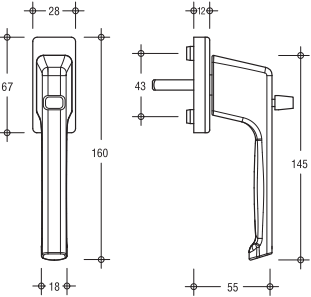
DIRIGENT-F/SP

Version	PU	Order number
29 mm square spindle, inside, 45° detent	20	6-28094-29-0-□
33 mm square spindle, inside, 45° detent	20	6-28094-33-0-□
38 mm square spindle, inside, 45° detent	20	6-28094-38-0-□



DIRIGENT-F/KD

Version	PU	Order number
29 mm square spindle, inside, with push-button	20	6-30268-29-0-□
33 mm square spindle, inside, with push-button	20	6-30268-33-0-□
38 mm square spindle, inside, with push-button	20	6-30268-38-0-□



DIRIGENT-F/CHK

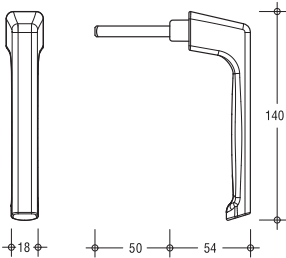
Version	PU	Order number
Inside, with Swiss night lock	20	6-28096-00-0-□

Order example

Colour 1 (silver), 5 (brown) or
7 (white)

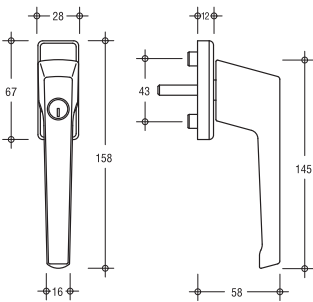
6-25993-00-0-□

DIRIGENT



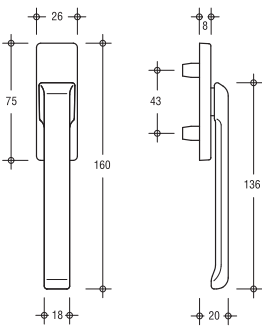
DIRIGENT-F/SG

Version	PU	Order number
Service handle, inside	20	8-00694-50-0-7



DIRIGENT Tilt-First

Version	PU	Order number
29 mm square spindle, inside, for Tilt&Turn function, lockable	20	6-31557-29-0-□
33 mm square spindle, inside, for Tilt&Turn function, lockable	20	6-31557-33-0-□
38 mm square spindle, inside, for Tilt&Turn function, lockable	20	6-31557-38-0-□



DIRIGENT-F/AF

Version	PU	Order number
Outside, flat	20	6-25223-00-0-□

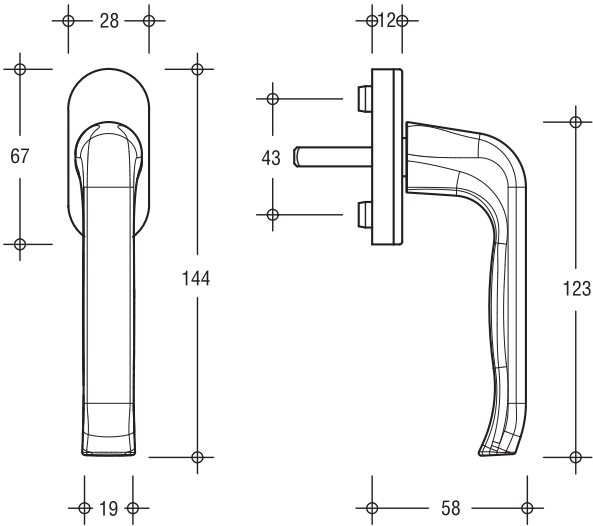
ADAGIO



The design of the ADAGIO window handles is characterised by round and soft forms. They are a comfortable to hold and easy to operate.

Product range: aluminium interior and exterior handles for timber, PVC and metal windows and balcony-doors.

Technical data	
Description	Data
Inside rosette	28 x 67 mm (round)
Detent	90° or 90° and 45° F/SP
Lug	Ø 10 mm
Length of lug	5 mm
Square spindle	fastened, 7 x 29, 7 x 33, 7 x 38 or 7 x 43 mm
Locking system	F/Z keyed alike
Rosette cover	pivotable
Fixing	concealed



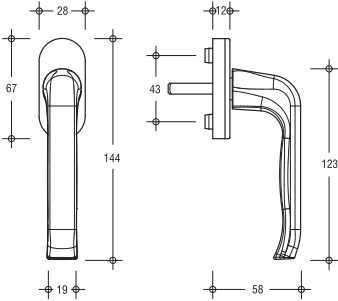
ADAGIO-F, ADAGIO-F/SP

Order example

Colour 1 (silver), 5 (brown) or 7 (white)

6-29548-29-0-□

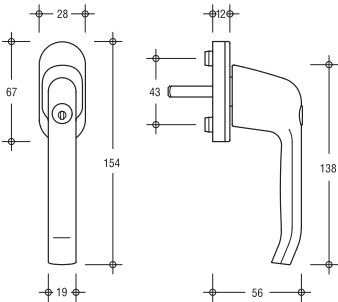
ADAGIO



ADAGIO-F [1]

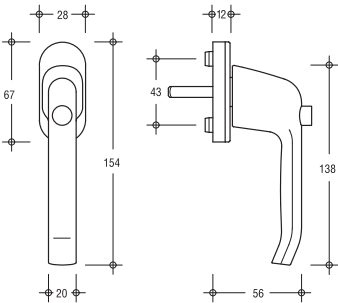
Version	PU	Order number
29 mm square spindle, inside	20	6-29548-29-0-□
33 mm square spindle, inside	20	6-29548-33-0-□
38 mm square spindle, inside	20	6-29548-38-0-□

[1] also w/o spindle



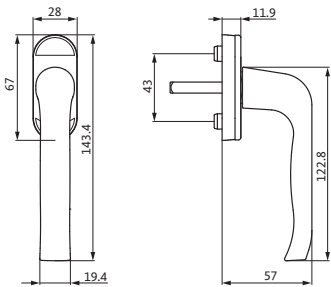
ADAGIO-F/Z

Version	PU	Order number
29 mm square spindle, inside, with push lock	20	6-29549-29-0-□
33 mm square spindle, inside, with push lock	20	6-29549-33-0-□
38 mm square spindle, inside, with push lock	20	6-29549-38-0-□



ADAGIO-F/KD

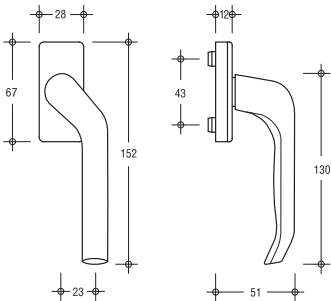
Version	PU	Order number
29 mm square spindle, inside, with push-button	20	6-29890-29-0-□
33 mm square spindle, inside, with push-button	20	6-29890-33-0-□
38 mm square spindle, inside, with push-button	20	6-29890-38-0-□



ADAGIO-F/SP

Version	Order number
33 mm square spindle, inside, 45° detent	6-31803-33-0-□
38 mm square spindle, inside, 45° detent	6-31803-38-0-□
43 mm square spindle, inside, 45° detent	6-31803-43-0-□

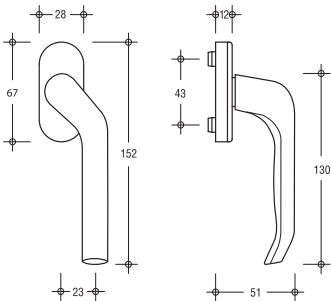
ADAGIO



ADAGIO-F/G
Cranked inside handles
for outward-opening windows and balcony-doors (Turn-Only sash)

Designation	Version	PU	Order number
ADAGIO-F/G-LS	Crank DIN LH, square rosette	20	6-31323-00-0-□
ADAGIO-F/G-RS	Crank DIN RH, square rosette	20	6-31221-00-0-□

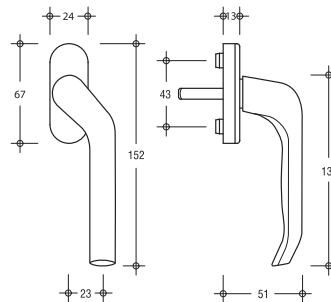
Illustration shows DIN LH



ADAGIO-F/G
Cranked inside handles
for outward-opening windows and balcony-doors (Turn-Only sash)

Designation	Version	PU	Order number
ADAGIO-F/G-LS	Crank DIN LH, round rosette	20	6-33636-00-0-□
ADAGIO-F/G-RS	Crank DIN RH, round rosette	20	6-33637-00-0-□

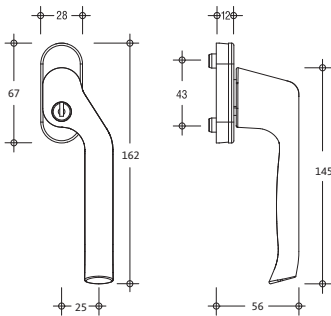
Illustration shows DIN LH



ADAGIO-F/G
Cranked inside handles
for outward-opening windows and balcony-doors (Turn-Only sash)

Designation	Version	PU	Order number
ADAGIO-F/G 24-LS	Crank DIN LH, round rosette	20	6-31441-38-0-□
ADAGIO-F/G 24-RS	Crank DIN RH, round rosette	20	6-31442-38-0-□

Illustration shows DIN LH



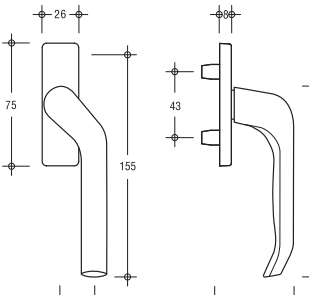
ADAGIO-F/GZ
Cranked inside handles
for outward-opening windows and balcony-doors (Turn-Only sash)

Designation	Version	PU	Order number
ADAGIO-F/GZ-LS	Crank DIN LH, round rosette	20	6-33451-00-0-□
ADAGIO-F/GZ-RS	Crank DIN RH, round rosette with push lock	20	6-33452-00-0-□

Illustration shows DIN LH

Order example
Colour 1 (silver), 5 (brown) or 7 (white)
6-31323-00-0-□

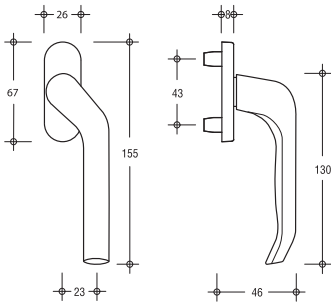
ADAGIO



ADAGIO-F/AG
Cranked outside handles
for inward-opening balcony-doors (Turn-Only sash)

Designation	Version	PU	Order number
ADAGIO-F/AG-LS	Crank DIN LH, square rosette	20	6-32411-00-0-□
ADAGIO-F/AG-RS	Crank DIN RH, square rosette	20	6-32412-00-0-□

Illustration shows DIN LH



ADAGIO-F/AG
Cranked outside handles
for inward-opening balcony-doors (Turn-Only sash)

Designation	Version	PU	Order number
ADAGIO-F/AG-LS	Crank DIN LH, round rosette	20	6-33634-00-0-□
ADAGIO-F/AG-RS	Crank DIN RH, round rosette	20	6-33635-00-0-□

Illustration shows DIN LH

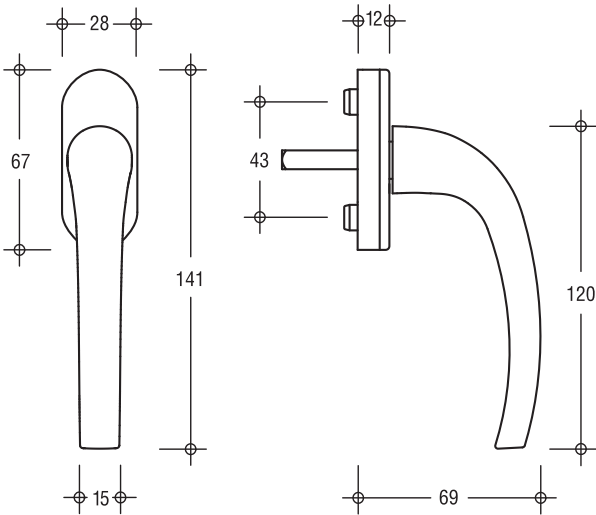
MODENA



The aesthetic design of the MODENA window handles is characterised by their dynamic form. They guarantee a high degree of operating comfort and ease of operation.

Product range: aluminium inside handles for timber, PVC and metal windows and balcony-doors.

Technical data	
Description	Data
Inside rosette	28 x 67 mm
Detent	90° or 90° and 45° F/SP
Lug	Ø 10 mm
Length of lug	5 mm
Square spindle	fastened, 7 x 29, 7 x 33 or 7 x 38 mm
Locking system	F/Z keyed alike
Rosette cover	pivotable
Fixing	concealed



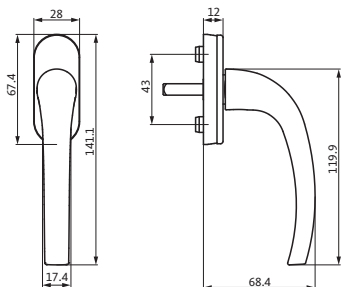
MODENA-F, MODENA-F/SP

Order example

Colour 1 (silver), 5 (brown) or 7 (white)

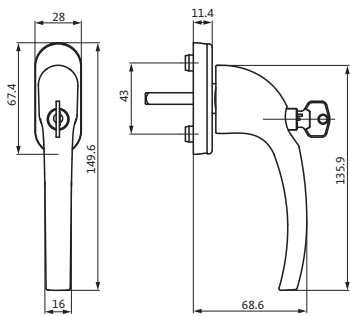
6-31977-25-0-□

MODENA



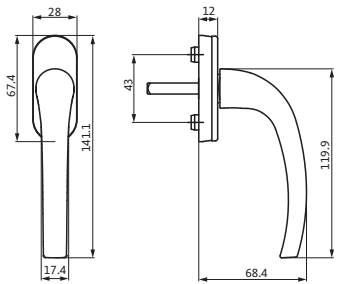
MODENA-F

Version	PU	Order number
25 mm square spindle, inside	20	6-31977-25-0-□
29 mm square spindle, inside	20	6-31977-29-0-□
33 mm square spindle, inside	20	6-31977-33-0-□
38 mm square spindle, inside	20	6-31977-38-0-□



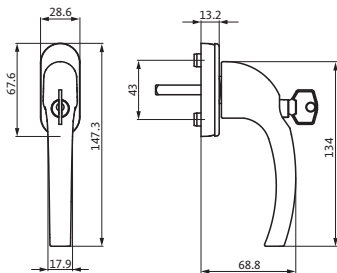
MODENA-F/Z

Version	PU	Order number
29 mm square spindle, inside, with push lock	20	6-31978-29-0-□
33 mm square spindle, inside, with push lock	20	6-31978-33-0-□
38 mm square spindle, inside, with push lock	20	6-31978-38-0-□



MODENA-F/SP

Version	PU	Order number
29 mm square spindle, inside, 45° detent	20	6-32319-33-0-□



MODENA-F/Z 100

Version	PU	Order number
29 mm square spindle, inside, with push lock	20	6-34397-29-0-□
33 mm square spindle, inside, with push lock	20	6-34397-33-0-□
38 mm square spindle, inside, with push lock	20	6-34397-38-0-□

Tested to ENV 1627 for resistance to pull-off and twist-off attempts at 100 Nm.

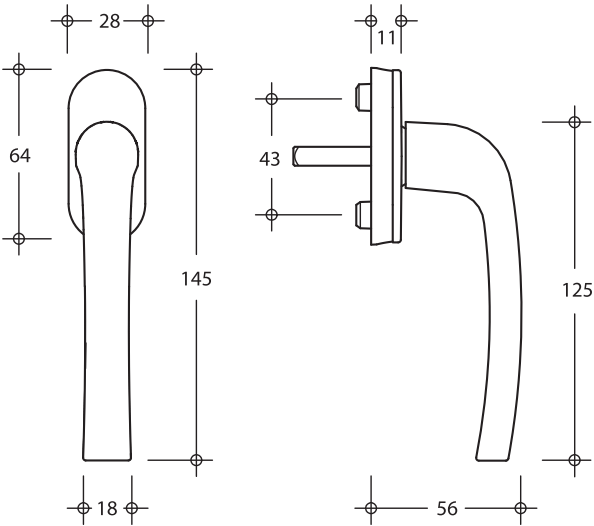
SOPRANO



The SOPRANO has a modern form which adds another dimension to the turn handle range. It sits comfortably in the hand and has modern design appeal.

Product range: aluminium inside handles for timber, PVC and metal windows and balcony-doors.

Technical data	
Description	Data
Inside rosette	28 x 64 mm
Detent	90° or 90° and 45° F/SP
Lug	Ø 10 mm
Length of lug	5 mm
Square spindle	fastened, 7 x 29, 7 x 33, 7 x 38 or 7 x 43 mm
Locking system	F/Z keyed alike
Rosette cover	pivotable
Fixing	concealed



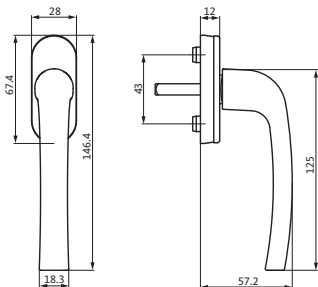
SOPRANO-F, SOPRANO-F/SP

Order example

Colour 1 (silver), 5 (brown) or 7 (white)

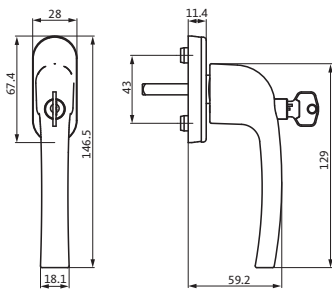
U-71984-13-0-□

SOPRANO



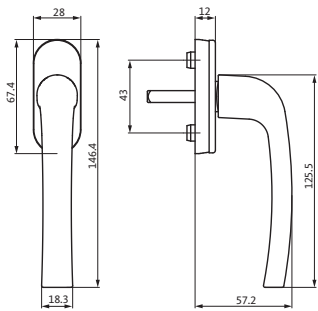
SOPRANO-F

Version	PU	Order number
13 mm square spindle, inside	20	U-71984-13-0-□
25 mm square spindle, inside	20	U-71984-25-0-□
29 mm square spindle, inside	20	U-71984-29-0-□
33 mm square spindle, inside	20	U-71984-33-0-□
38 mm square spindle, inside	20	U-71984-38-0-□
43 mm square spindle, inside	20	U-71984-43-0-□



SOPRANO-F/Z

Version	PU	Order number
29 mm square spindle, inside, with push lock	20	U-71987-29-0-□
33 mm square spindle, inside, with push lock	20	U-71987-33-0-□
38 mm square spindle, inside, with push lock	20	U-71987-38-0-□



SOPRANO-F/SP

Version	PU	Order number
29 mm square spindle, inside, 45° detent	20	U-71970-29-0-□
33 mm square spindle, inside, 45° detent	20	U-71970-33-0-□
38 mm square spindle, inside, 45° detent	20	U-71970-38-0-□

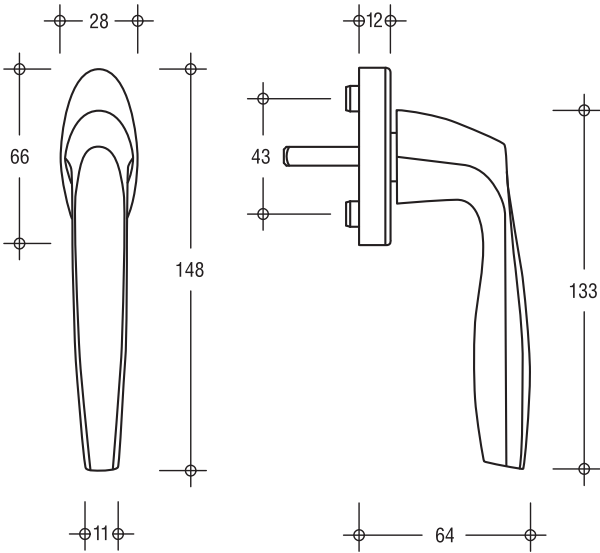
SAN REMO



The distinctive feature of SAN REMO window handles is their linear yet soft grip design, which means they fit snugly in the hand and are easy to operate.

Product range: aluminium inside handles for timber, PVC and metal windows and balcony-doors.

Technical data	
Description	Data
Inside rosette	28 x 66 mm
Detent	90° or 90° and 45° F/SP
Lug	fixed, Ø 10 mm
Length of lug	5 mm
Spindle	fixed, square 7 x 29, 7 x 33 or 7 x 38 mm
Locking system	F/Z keyed alike
Rosette cover	pivotable
Fixing	concealed



SAN REMO-F, SAN REMO-F/SP

Standard versions		
Designation	Version	Order number
SAN REMO-F	29 mm square spindle, inside	G-21608-29-0-□
	33 mm square spindle, inside	G-21608-33-0-□
	38 mm square spindle, inside	G-21608-38-0-□
SAN REMO-F/Z	29 mm square spindle, inside, with push lock	G-21609-29-0-□
	33 mm square spindle, inside, with push lock	G-21609-33-0-□
	38 mm square spindle, inside, with push lock	G-21609-38-0-□

Special versions		
Designation	Version	Order number
SAN REMO-F/SP	Inside, 45° detent	6-32363-33-0-7

Order example

Colour 1 (silver), 5 (brown) or 7 (white)

G-21608-29-0-□

BELCANTO



BELCANTO turn handle

Technical data		
Description		Data
Opening type		Tilt&Turn window Tilt-First window Turn-Only window Tilt-Only window
DIN side of hinges		left right
Distance between fixing holes [mm]		43
Finish		Matt stainless steel
Width of square spindle [mm]		7
Length of square spindle [mm]		29
	PU	Order number
	1	B-78820-0W-0-8



BELCANTO turn handle, lockable, 100 Nm

Technical data		
Description		Data
Opening type		Tilt&Turn window Tilt-First window Turn-Only window Tilt-Only window
DIN side of hinges		left right
Distance between fixing holes [mm]		43
Finish		Matt stainless steel
Width of square spindle [mm]		7
Length of square spindle [mm]		29
	PU	Order number
	1	B-78820-10-0-8



BELCANTO Tilt-First turn handle, lockable

Technical data		
Description		Data
Opening type		Tilt-First window
DIN side of hinges		left right
Lochbild Befestigungsabstand [mm]		43
Finish		Matt stainless steel
Width of square spindle [mm]		7
Length of square spindle [mm]		29
	PU	Order number
	1	B-78820-14-0-8

RONDO



RONDO turn handle

Technical data		
Description	Data	
Opening type	Tilt&Turn window Tilt-First window Turn-Only window Tilt-Only window	
DIN side of hinges	left right	
Distance between fixing holes [mm]	43	
Finish	Matt stainless steel	
Width of square spindle [mm]	7	
Length of square spindle [mm]	29	
	PU	Order number
	1	B-78820-18-0-8



RONDO turn handle, lockable, 100 Nm

Technical data		
Description	Data	
Opening type	Tilt&Turn window Tilt-First window Turn-Only window Tilt-Only window	
DIN side of hinges	left right	
Distance between fixing holes [mm]	43	
Finish	Matt stainless steel	
Width of square spindle [mm]	7	
Length of square spindle [mm]	29	
	PU	Order number
	1	B-78820-22-0-8



RONDO Tilt-First turn handle, lockable

Technical data		
Description	Data	
Opening type	Tilt-First window	
DIN side of hinges	left right	
Distance between fixing holes [mm]	43	
Finish	Matt stainless steel	
Width of square spindle [mm]	7	
Length of square spindle [mm]	29	
	PU	Order number
	1	B-78820-26-0-8

TREMOLO



TREMOLO turn handle

Technical data		
Description		Data
Opening type		Tilt&Turn window Tilt-First window Turn-Only window Tilt-Only window
DIN side of hinges		left right
Distance between fixing holes [mm]		43
Finish		Matt stainless steel
Width of square spindle [mm]		7
Length of square spindle [mm]		29
	PU	Order number
	1	B-78820-30-0-8



TREMOLO turn handle, lockable, 100 Nm

Technical data		
Description		Data
Opening type		Tilt&Turn window Tilt-First window Turn-Only window Tilt-Only window
DIN side of hinges		left right
Distance between fixing holes [mm]		43
Finish		Matt stainless steel
Width of square spindle [mm]		7
Length of square spindle [mm]		29
	PU	Order number
	1	B-78820-34-0-8



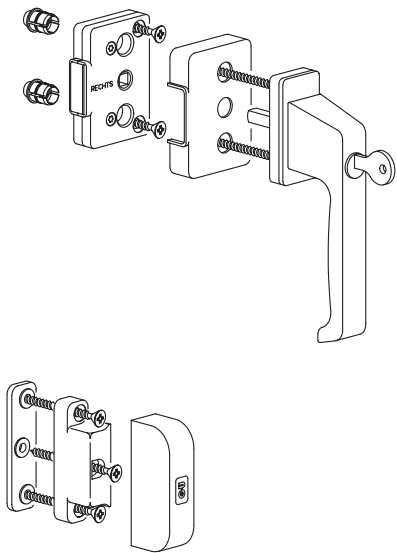
TREMOLO Tilt-First turn handle, lockable

Technical data		
Description		Data
Opening type		Tilt-First window
DIN side of hinges		left right
Distance between fixing holes [mm]		43
Finish		Matt stainless steel
Width of square spindle [mm]		7
Length of square spindle [mm]		29
	PU	Order number
	1	B-78820-38-0-8

Accessories for handles



Surface-mounted lock



Retrofittable security for Turn-Only and Tilt&Turn windows

This product provides effective burglar protection and is easy to install. The lockable turn handle locks the window's central locking system. If the glass is broken or the window frame is drilled through, the locking system cannot be unlocked from the outside.

The metal deadbolt engages in the stable strike box with a deadbolt throw of 18 mm. This effectively prevents the window sash from being lifted out and forced open. The combined action of the lockable turn handle and the window face-fixed lock produces a strong burglar-inhibiting effect.

The face-fixed lock can be retrofitted to Turn-Only and Tilt&Turn sashes equipped with drive-gears with 15 mm backset. Suitable packers are used to compensate for the overlap height.

The face-fixed lock locks the sash in the closed position in addition to the central locking system.

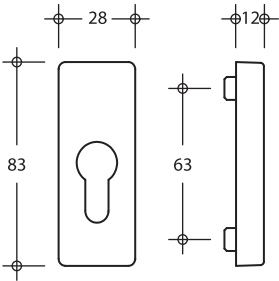
Installation is straightforward – the face-fixed lock is screwed to the sash under the turn handle, then the strike box is positioned on the frame and securely fastened with screws. Installation instructions are enclosed.

Face-fixed lock set with DIRIGENT F/Z turn handle	
Finish	Order number
EV1/F1	K-14662-00-0-1
Dark brown	K-14662-00-0-5
White (RAL 9016)	K-14662-00-0-7

Lateral space requirement		
Material	Clearance	Sash overlap width
Timber windows	4 mm	26 mm
	Euro-rebate	23 mm
PVC windows	20 / 22 mm	22 mm

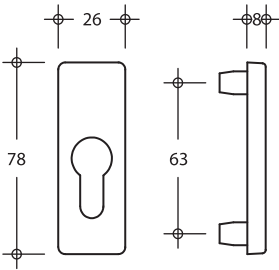
Contents of box K-14662-00-0-□	
Qty.	Description
1	DIRIGENT-F/Z turn handle, lockable
1	Square spindle 7 x 75 mm
1	Face-fixed lock
1	Cover cap for face-fixed lock
2	Bushing for Ø 10 mm
2	Bushing for Ø 12 mm
1	Strike box
1	Strike box cover cap
1	Packer 3 mm
1	Packer 4 mm
1	Packer 5 mm
1	Packer 6 mm
7	Spax countersunk screw 5 x 55 mm

Accessories for handles



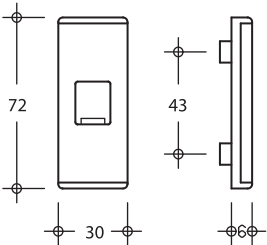
PC rosette
Inside, with PC-hole and lug Ø 10 mm

Description	PU	Order number
PC/A rosette, square	20	K-17205-02-0-□
PC/A rosette, oval	20	K-17204-02-0-□
RC/A rosette, square R2	20	K-17205-03-0-□
RC/A rosette, oval R2	20	K-17204-03-0-□
Version: PC rosette, square		



PC outside rosette
Outside, with PC-hole and threaded lug Ø 10 mm

Description	PU	Order number
PC outside rosette, square	20	9-43605-02-0-□
PC outside rosette, oval	20	9-43582-02-0-□
RC outside rosette, square R2	20	9-43605-03-0-1
RC outside rosette, oval R2	20	9-43582-03-0-1
Version: PC outside rosette, square		



Cover rosette/F
Inside – flat, slide shutter for service handle

	PU	Order number
	20	6-24913-00-0-□

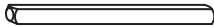


Adapter sleeve
For increasing the size of the threaded lug from Ø 10 to Ø 12 mm

	PU	Order number
	100	9-40496-00-0-0

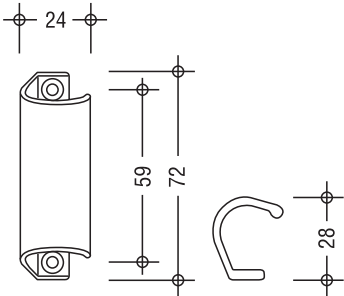
Order example
Colour 1 (silver), 5 (brown) or 7 (white)
K-17205-02-0-□

Accessories for handles



Square spindles 7 mm

Spindle length in mm	Sash thickness in mm	PU	Order number
< 56	70	20	9-26874-16-0-1
118	56 – 68	20	9-26874-56-0-1
131	69 – 80	100	9-26874-69-0-1
143	81 – 92	20	9-26874-81-0-1



Fixed pull, outside

	PU	Order number
	50	9-22921-00-0-□



Countersunk screws M5

For fastening the turn handle

Dimension	Inside operation, for spindle length in mm	PU	Order number
M5 x 40	29 and 33	400	9-13255-40-0-1
M5 x 50	38	400	9-13255-50-0-1
Dimension	Operation from both sides, for sash thickness	PU	Order number
M5 x 60	50 – 54	400	9-13255-60-0-1
M5 x 65	55 – 59	400	9-13255-65-0-1
M5 x 70	60 – 64	400	9-13255-70-0-1
M5 x 75	65 – 69	400	9-13255-75-R-1
M5 x 80	70 – 74	400	9-13255-80-0-1
M5 x 85	75 – 80	400	9-13255-85-R-1





Table of contents

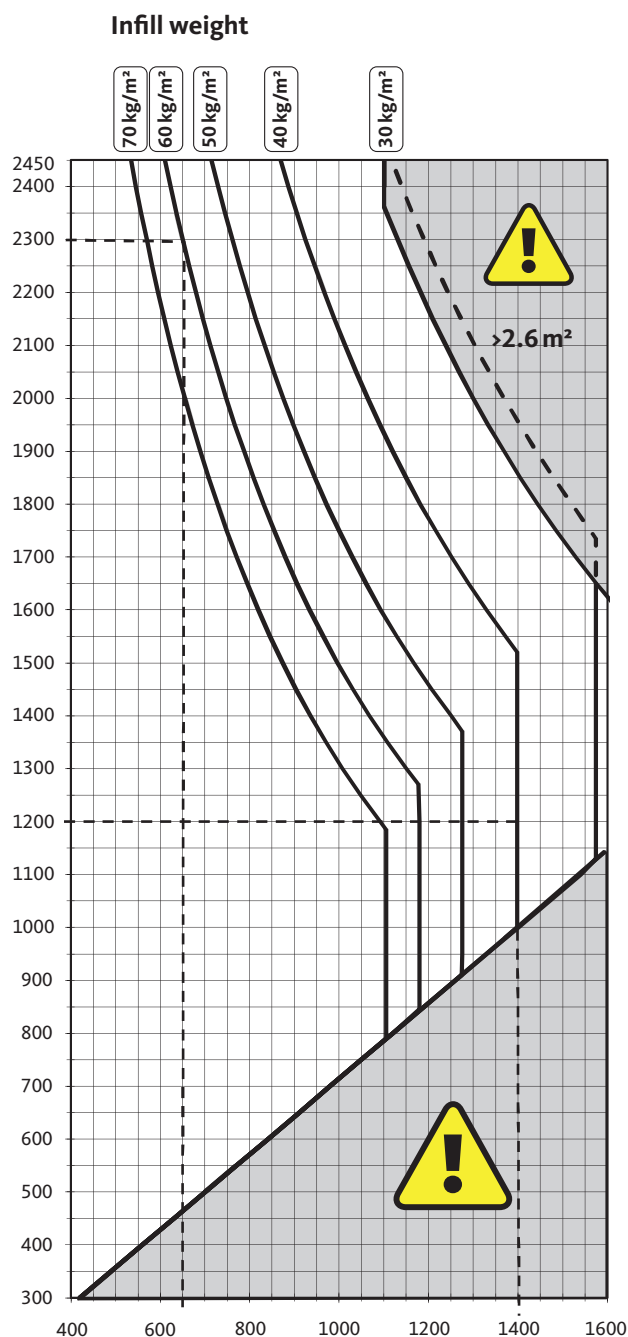
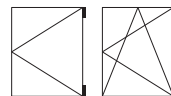


6.0 Technical information

Application diagram	78
Rebate, screw and position dimensions	79 – 80
Notes on installation and setting	81 – 84
Overview for ordering drilling jigs and adjusting tools	85
List of installation drawings	86
List of abbreviations	87
Product information and intended use	88
5-year guarantee	89
Misuse and product performance	90
Duty to inform and to instruct and use for similar kinds of hardware	91
Product maintenance	92

Application diagram

For sash weights up to maximum 100 kg – drawing no. 0-45919



Prerequisite for using the application diagram:

- Verifications regarding the attachment of load-bearing components to the window system by the window fabricator according to TBDK with the following forces:
 - on the stay-bearing with 2710 N
 - on the pivot-rest with 2890 N
- Glass reduction CG $\geq$ 28 mm
- Profile weight PW $\leq$ 3.25 kg/m

Attention:

The maximum sash weight of 100 kg is only permitted in certain areas of the application diagram.

Only sash formats appearing to the left of the respective glass weight graph are permissible.

format not permitted

Reading examples:

- Infill weight = 60 kg/m²**
With SRW = 650 mm, the SRH max. = 2300 mm, which corresponds to a maximum sash weight of 100 kg.
- Infill weight = 40 kg/m²**
With an SRW = 1200 mm, the max. SRH = 1400 mm, which corresponds to a maximum sash weight of 80 kg.

This application diagram is only valid in conjunction with the appropriate installation drawing 0-46740.

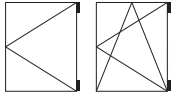
For notes on intended use, see drawing 0-46789.

Test and calculation basis:

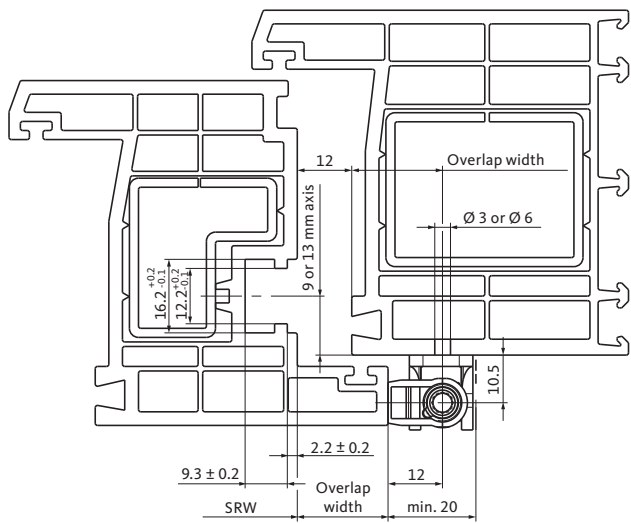
- Tilt&Turn test acc. to EN 13126-8:2017, grade H2:
 - 10,000 Tilt&Turn-Only cycles
 - 10,000 Turn-Only cycles
- Test format:
SRW 1300 x SRH 1200 : 100 kg

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

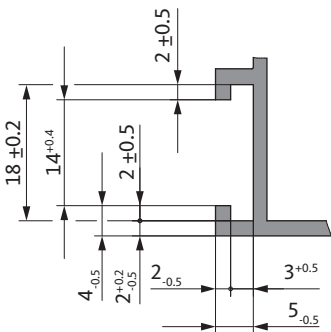
Rebate, screw and position dimensions



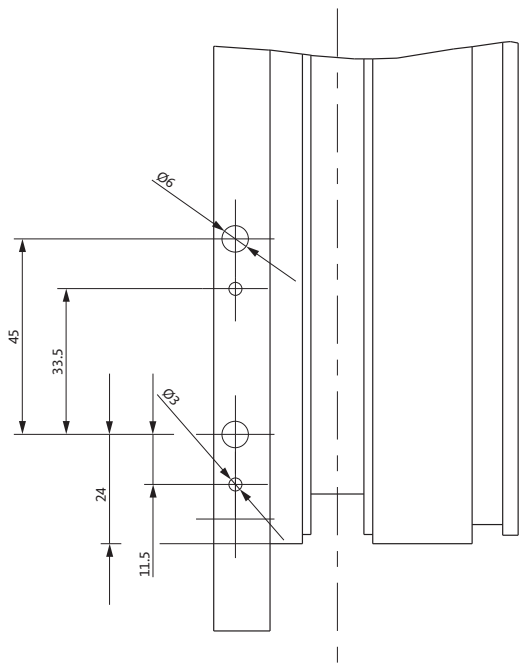
Hinge dimensions EURO-JET
for PVC profile



Frame dimensions for aluminium windows
with 16 mm sash groove



EURO-JET drill-in hinge screw
and position dimensions
without (turn-restriction) brake

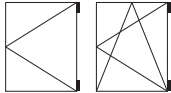


Drilling jigs for drill-in hinge

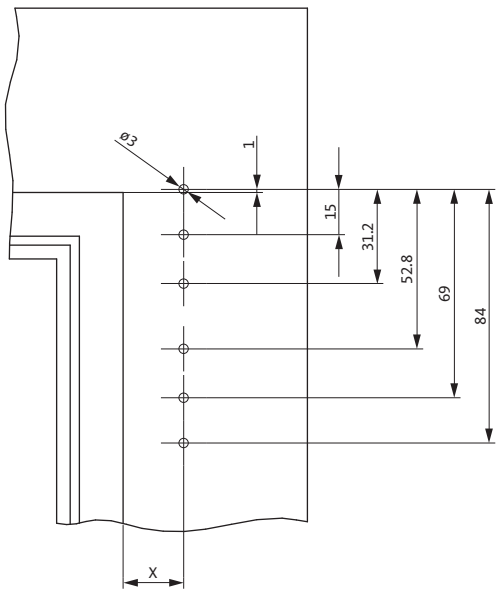
Order number	Axis
6-38619-09-0-0	9 mm
6-38619-13-0-0	13 mm

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Rebate, screw and position dimensions



Screw and position dimensions
EURO-JET stay and pivot-rest



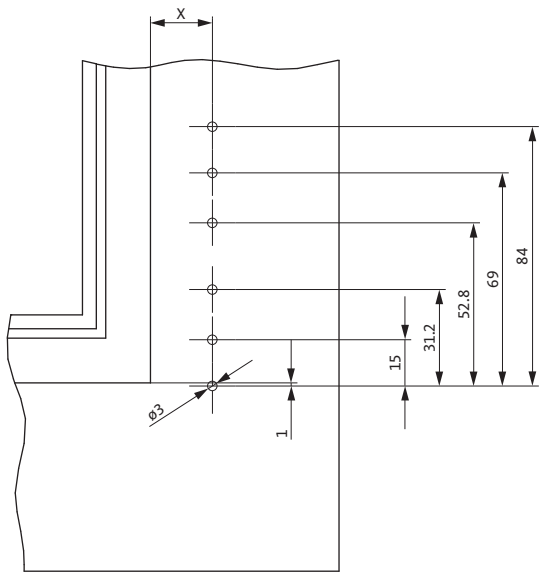
Dimension X = setting the overlap width on the drilling jig scale
 Dimension X = overlap (18, or 22 mm)

Drilling jig for pivot-rest and stay-bearing,
drilling diameter 3 mm

Order number	for profile systems
6-27412-04-0-00	Standard

Drilling jig for pivot-rest and stay-bearing,
drilling diameters 3 mm and 6 mm

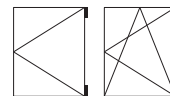
Order number	for profile systems
6-27412-54-0-00	Standard



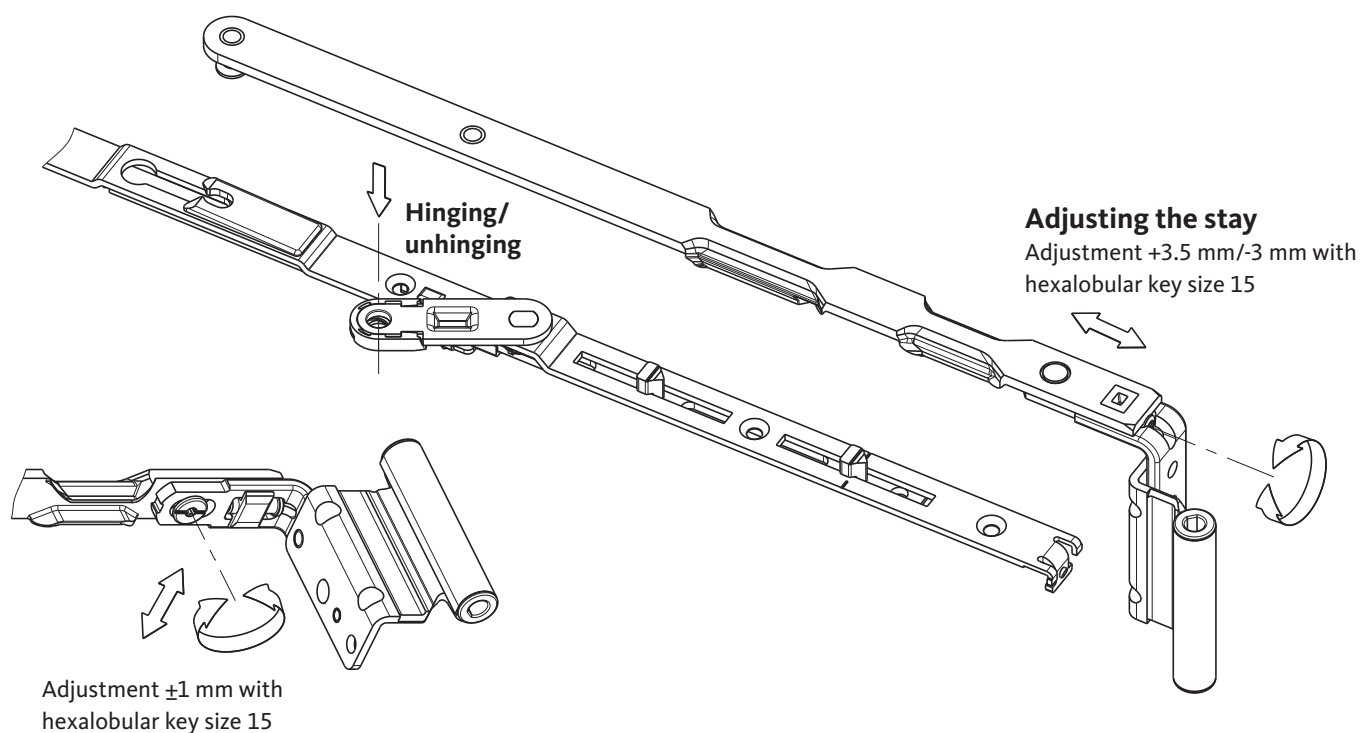
Dimension X = setting the overlap width on the drilling jig scale
 Dimension X = overlap (18, or 22 mm)

Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Notes on installation and setting



Hinging and unhinging the stay

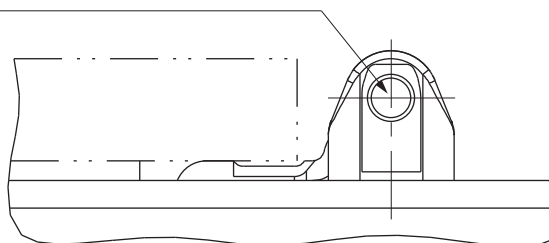


Installing the stay-bearing pin

ATTENTION:

- Close the sash
- Turn handle in tilt position
- Insert the stay-bearing pin from below until it is flush with the stay-bearing.

Slightly lift sash on gear side for easier mounting. Tighten the stay-bearing pin with tool 6-37291 and 6-38513-04 or a screwdriver with slotted end 5 x 1 mm.

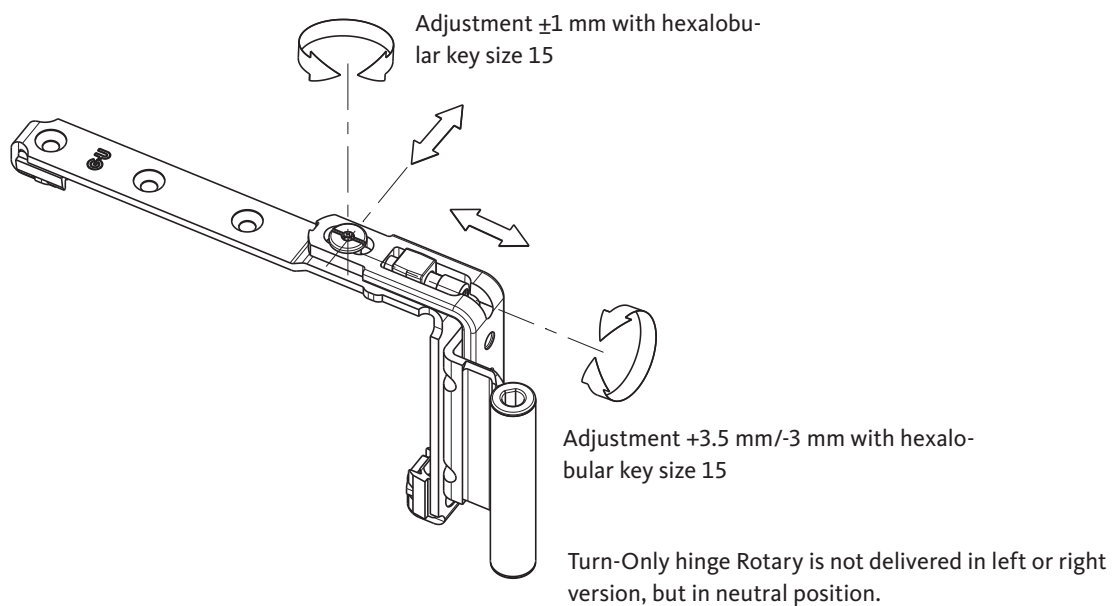


Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Notes on installation and setting

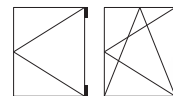


Adjusting the Turn-Only hinge

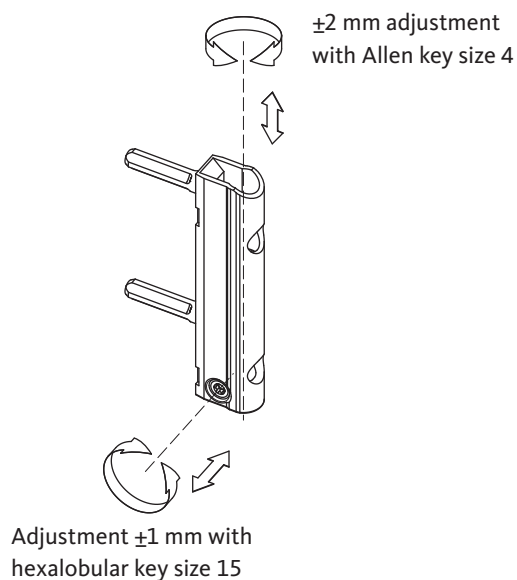
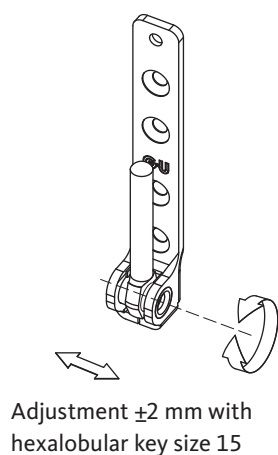


Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Notes on installation and setting

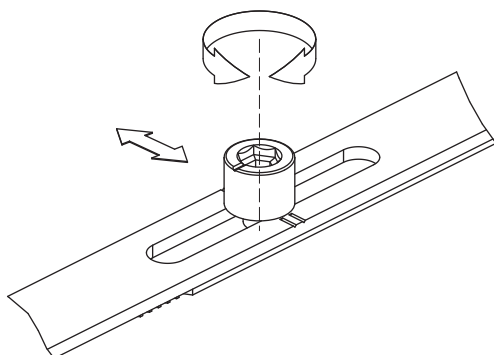


Adjusting on pivot-rest and drill-in hinge

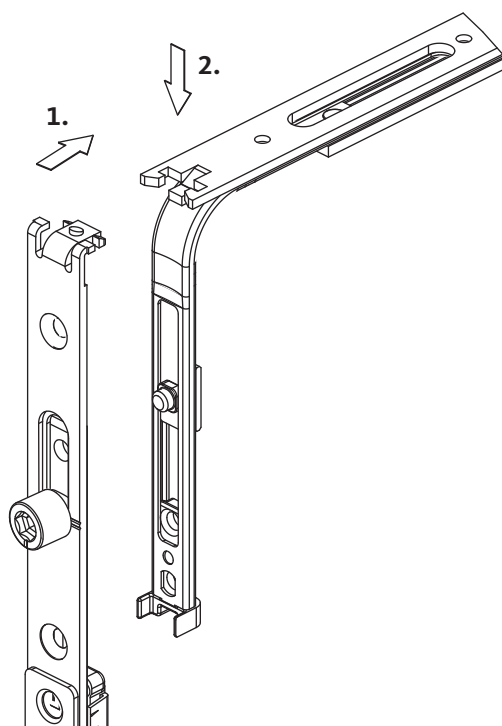


Adjusting the Duplex locking cam

Gasket pressure ± 1 mm with Allen key key siez 4 and 6

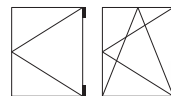


Hinging the central locking system

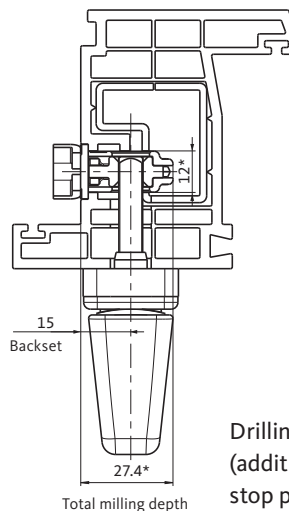
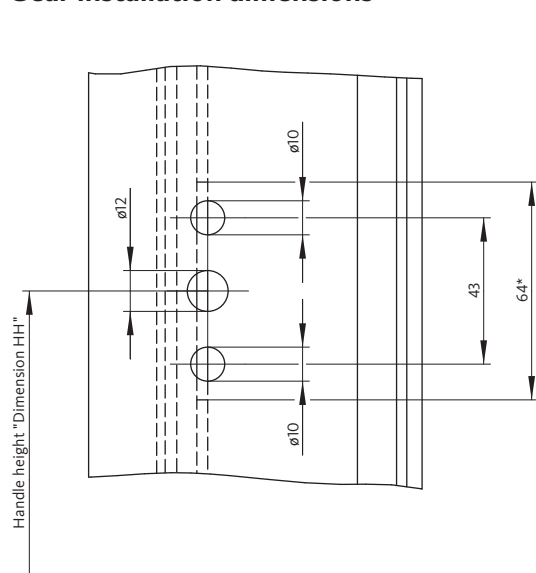


Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Notes on installation and setting



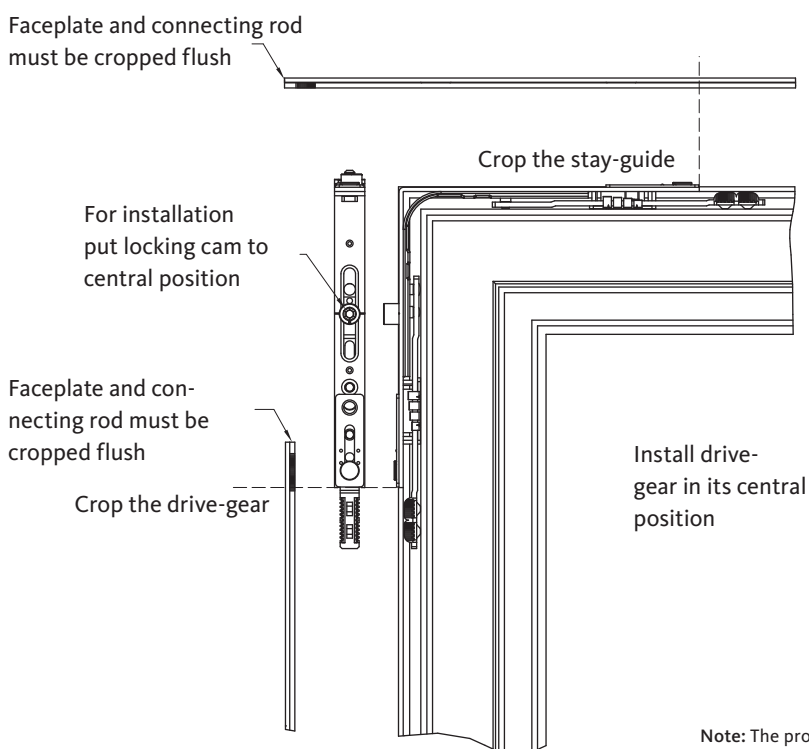
Gear installation dimensions



Drilling jig for turn handle part no. 6-22459
(additionally for fixed gear:
stop part no. 9-27406)

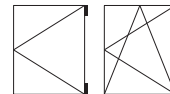
* Milling dimension of gear case

Cropping the drive-gear and stay-guide



Note: The product information of the system provider, especially regarding design and fabrication, maximum sash dimensions and maximum sash weights as well as material qualities, eg linear expansions of profiles, must be observed.

Overview for ordering drilling jigs and adjusting tools



Drilling jigs

Application range	Designation	PU	Order number
Installing the pivot-rest and stay-bearing	EURO-JET Tilt&Turn hardware, EURO-JET Turn-Only hardware		
	Drilling-jig for drill-in hinge		
	9 mm axis	1	6-38619-09-0-0
	13 mm axis	1	6-38619-13-0-0
	Drilling jig for drill-in hinge with optional adjustable gasket pressure		
	9 mm and 13 mm axis (adjustable)	1	6-38847-13-0-0
	Drilling jig for pivot-rest and stay-bearing, drilling diameter 3 mm		
	Standard version	1	6-27412-04-0-0
	Drilling jig for pivot-rest and stay-bearing, drilling diameters 3 and 6 mm		
	Standard version	1	6-27412-54-0-0
Striker installation	1 set of positioning jigs for strikers, fixed handle height, striker length 55 mm	1	6-32644-00-0-0
	1 set of positioning jigs for strikers, variable handle height, striker length 55 mm	1	6-32645-00-0-0
Installation of turn handle	Drilling jig for turn handle, gear with 15 mm backset	1	6-22459-00-0-0
	Stop for 6-22459 (for fixed handle height)	1	9-27406-00-0-1
Centre-closer	Drilling jig for centre-closer for screwing on K-14239-**-0-*	1	G-13154-12-0-0
Striker installation on 2-sash windows and balcony-doors	Positioning jig for 2-sashed windows and balcony-doors with symmetrical division	1	6-32963-00-0-1

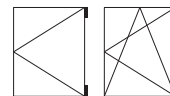
Adjustment tools

Application range	Designation	PU	Order number
Stay-arm, drill-in hinge, rebate corner-hinge, pivot-rest locking cam	Ratchet wrench bit driver	1	H-00866-00-0-0
	Flexible bit-holder with flexible shank	1	H-00757-00-0-0
	Bits for bit-wrench and bit-holder		
	Size	Length mm	
	Torx 15 bit	15	1 H-00822-15-0-0
	Torx 15 bit	50	1 H-00819-15-0-0
	Torx 15 bit	75	1 H-00820-15-0-0
	4 mm Allen bit	50	1 H-01419-50-0-0
	Torx wrench	Size Torx 15	1 H-00809-15-0-0
	L-shaped Torx wrench	Size Torx 15	1 9-43631-00-0-6
	Allen key	Size 4	1 9-43631-64-0-6
	Adjusting tool, complete with ratchet wrench bit driver and bits	1	6-37291-00-0-1
	Adjusting tool, complete version as fan	1	6-37845-00-0-1
	Pull-handle for stay-bearing pin	1	6-38513-04-0-9
	4 mm adjusting tool U-shaped	1	9-43631-64-0-6
	15 mm Torx adjusting tool U-shaped	1	9-43631-00-0-6
	15 mm Torx adjusting tool L-shaped	1	9-42886-00-0-6
	15 mm Torx adjusting tool T-handle	1	H-00346-15-0-0



Drawing number	Description
0-44866-DD-0-0	Central locking system Tilt&Turn and Turn-Only hardware Fixed and variable handle height
0-46740-DD-0-0	Hinge side Tilt&Turn and Turn-Only hardware Hinge side D
0-46572-DD-0-0	Lever-operated gear Dummy-mullion sash hardware Fixed handle height
0-46573-DD-0-0	Lever-operated gear Dummy-mullion sash hardware Variable handle height
0-45919-DD-0-0	Application diagram Tilt&Turn and Turn-Only hardware Sash weights up to max. 100 kg
0-45986-DC-0-0	Hardware installation with minimal Tilt&Turn dimensions SRW 280–400
0-46684-DD-0-0	Additional stay for 1- and 2-sashed Tilt&Turn windows SRW 1301–1600

List of abbreviations



Sorting in alphabetical order

Abbreviation	Description
AX	Axis
BS	Backset
CC	Cover cap
CD	Corner-drive
CH	Corner hinge
CL	Centre-lock
CLS	Central locking system
DIH	Drill-in hinge
FHH	Fixed handle height
FHHG	Fixed handle height (with gear)
GEAR	Drive-gear
HH	Handle height
L	Left
LC	Locking cam
LOG	Lever-operated gear
OL	Overlap (generally refers to the overlap width)
OLH	Overlap height
OLW	Overlap width
PC	Profile cylinder
PP	Positioning pin
PR	Pivot-rest
PU	Packing unit
R	Right
RCH	Rebate corner-hinge
S	Striker
SA	Stay-arm
SB	Stay-bearing
SBP	Stay-bearing pin
SG	Stay-guide
SH	Stay-hinge
SM	Surface-mounted
SRW	Sash rebate width
SRH	Sash rebate height
ST	Sash thickness
SW	Sash weight
TBDK	Directive: Attachment of load-bearing components of Turn-Only and Tilt&Turn hardware
TI-ON	Tilt-Only window
TU-ON	Turn-Only windows or balcony-doors
T&T	Tilt&Turn windows or balcony-doors
VHBE	Directive: Hardware for windows and balcony-doors, guidelines/advice for end-users
VHBH	Directive: Hardware for windows and balcony-doors, guidelines/advice on the product and on liability
VHH	Variable handle height
VHHG	Variable handle height (with gear)
WB	with (turn-restriction) brake
W/O B	without (turn-restriction) brake
ZH	Lever-operated gear with riveted-on toggle lever
ZK	Lever-operated gear with loose toggle lever

Product information and intended use



Hardware versions

Turn-Only and Tilt&Turn hardware

Definition

For the purpose of this definition, Turn-Only and Tilt&Turn hardware is single-handle Turn-Only and Tilt&Turn hardware for windows and balcony-doors in building construction. Their purpose is to put window and balcony-door sashes in a turn-only position, or a tilt position which is restricted by the design of the stay, by operating a hand lever.

Use

Turn-Only and Tilt&Turn hardware is used for vertically installed windows and balcony-doors made of timber, PVC, aluminium or steel and combinations of these materials. For the purpose of this definition, conventional Turn-Only and Tilt&Turn hardware locks window and balcony-door sashes, or puts them into different ventilation positions. As a rule the opposing force of a gasket must be overcome when closing.

Additional hardware for Turn-Only and Tilt&Turn hardware, fanlight hardware

Definition and application

For the purpose of this definition, rebate stays as well as security and cleaning stays in fanlight openers limit the tilting movement of the window sash once the stay has been detached. The catch position thus achieved is slightly larger than the opening width achieved by the opening stay. Rebate and cleaning stays also hold the window sash in the cleaning position. For the purpose of this definition, hardware for coupled sashes consists of hinges that allow the coupled sash to be opened to clean the inner surfaces of the glass and couplings that lock the coupled sash on the side opposite the hinge. Operation of the coupled sash hardware for any other purpose other than cleaning the glass does not correspond to the intended use. For the purpose of this definition, window friction stays restrict the movement of Turn-Only sashes and of Tilt&Turn sashes in turning position – e.g. by means of friction. Depending on the intensity of the friction, they have the effect of fixing the sash in position without limiting the opening. For the purpose of this definition, hanging bearings are Tilt-Only hinges that, due to the position of their centre of rotation and because a maximum dimension for the sash overlap of the window sash below is taken into account, allow the tilt sash to be opened by 180°. When this additional hardware is used, the product information on the main hardware and information on its intended use must be observed.

Deviating usage – Exclusion of liability

Any deviating usage is considered as unintended use and leads to exclusion of liability.

Notes regarding use restrictions

Opened balcony-door and window sashes as well as window and balcony-door sashes that are not locked or put in the tilt position only provide a shielding function and do not satisfy the requirements for joint impermeability, resistance to driving rain, sound insulation, thermal insulation and burglar inhibition. Windows and balcony-doors must be closed and locked if wind or draughts are present. Wind and draughts are present if the window or balcony-door opens and closes of its own accord without control in one of the opening positions due to air pressure/suction. Window and balcony-door sashes can only be fixed in the open position with additional locking hardware.

Necessity of special agreements in case of extended requirements

Burglar-inhibiting windows and balcony-doors and windows and balcony-doors for wet rooms and for use in environments whose air contains aggressive and corrosive substances require hardware with performance characteristics that are harmonised and agreed separately for each individual application. Their resistance to wind loads when closed and locked depends on the construction of the relevant window and balcony-door. If it is necessary to absorb specified wind loads (according to EN 12210 for example – especially testing pressure p_3), suitable hardware combinations must be coordinated and agreed on the basis of the window or balcony-door construction and frame material. Generally the hardware as defined in 1.1 meets the requirements of barrier-free apartments (e.g. according to DIN 18040). However, corresponding hardware combinations and installations are required in the windows and balcony-doors that must be coordinated and agreed separately.

5-year guarantee



5-year guarantee for the EURO-JET Tilt&Turn hardware range

In addition to the statutory rights in accordance with general sales, supply & payment conditions, GRETSCH-UNITAS GmbH Baubeschläge, Johann-Maus-Straße 3, 71254 Ditzingen, Germany offers its contractual partners in purchase contracts the following guarantee on all load-bearing parts (with the exception of electronic components) supplied within the scope of the GU EURO-JET hardware programme:

Guarantee promise

GRETSCH-UNITAS GmbH Baubeschläge guarantees all load-bearing parts against breakage during the guarantee period, providing the guarantee conditions are complied with.

The **guarantee period** is 5 years, beginning with the delivery of the goods (§ 477 German Civil Code).

We agree to provide the following guarantee:

In the event of any material breakage, a replacement will be delivered free of charge. Should any parts be discontinued, then an alternative part of equal specification will be delivered. Any such parts claimed under the terms of this guarantee will be delivered to the delivery address of the original sales invoice.

Terms of guarantee

The guarantee is deemed valid only on condition that the hardware has been installed and operated correctly and in full accordance with the manufacturers' guidelines and that the following maintenance works have been carried out provably at least once a year:

- Operational check and lubrication of all moving parts and locking points. Only cleaning agents that do not affect the corrosion protection may be used.
- The surface is subject to guarantee only if the hardware has not been affected by aggressive substances from the frame material, the paint finish or the environment.
- All size and weight limitations as specified in the installation instructions must be observed. All security-relevant hardware components must be checked regularly for secure fixing and wear and tear. If necessary, fixing screws must be re-tightened or the parts replaced. Adjustment, parts replacement and hinging/unhinging of opening sashes are to be carried out by specialists only.

In the event of any claim, a written notification within the guarantee period is required. Claims under the guarantee shall be time-barred after 6 months following the incident which led to the claim.

Our guarantee liability in accordance with the provisions in our General Terms and Conditions is not limited by this promise of guarantee within the duration of the statutory warranty period. Likewise, the statutory warranty liability is not extended by this guarantee promise. Claims arising from this additional guarantee promise can only be derived on the basis of the guarantee stated above and do not cover any compensation claims, assembly/disassembly costs or similar.

Exclusion of liability

The products of the Gretschi-Unitas group are permanently adapted and developed to meet the growing demands of the market.

We also reserve the right to make changes during the course of technical development.

The necessity for this is based on:

- Technical development
- Changes and adaptations in the product range
- Adaptation to changes in legislation and technical standards

The content of our documents was compiled with the greatest possible care. However, we accept no responsibility for errors or inaccuracies in relation to representation and description of the products.

Thank you for your understanding.

Misuse and product performance



Misuse

Misuse – by which is meant use of the product not in accordance with the intended use – of the aforementioned hardware for balcony-doors and windows specifically refers to the following cases in particular:

- if obstructions are placed in the opening area between the frame and sash thus making its intended use more difficult or preventing it altogether,
- if additional loads act on the window or balcony-door sashes (i.e. children swinging on these),
- if window and balcony-door sashes are pushed or even slammed in a manner which is not in accordance with their intended purpose or is not controlled (e.g. due to wind) with the result that either the hardware, frame materials or other individual parts of the window sashes or balcony-doors are damaged or destroyed or where consequential damage could occur,
- if persons reach between the sash and frame or if a person or parts of the body are in this area (danger to life and limb) when closing (or pushing shut).

Additional points to observe in relation to fanlight hardware

- if the stay-arms are not attached and secured in compliance with the manufacturer's instructions,
- if the window sash is not carefully put into the cleaning position when the opening stay is released.

Product performance – information on application by manufacturer

Maximum sash weight

The sash weights and maximum sash dimensions prescribed by the manufacturer for the individual hardware versions must not be exceeded. The component with the lowest permissible load-bearing capacity determines the max. sash weight. Application diagrams and assignment of components must be observed.

Additional points to observe in relation to fanlight hardware

Apart from the sash weight, the distance between the sash's centre of gravity and its pivot point is decisive for determining the maximum permissible sash dimensions. When determining the maximum sash size and the number of coupled sashes, it is important to observe the manufacturer's instructions for the various types of drive.

Sash sizes

The application diagrams in the planning documents, product catalogues or hardware installation instructions show the relationships between the permissible sash widths and sash heights and different glass weights or total glass thicknesses. The sash dimensions or orientation (portrait or landscape format) thus determined – as well as the maximum sash weight – must on no account whatsoever be exceeded.

Composition of hardware

The specifications of the manufacturer regarding hardware configuration (e.g. use of additional stays, design of hardware for burglar-inhibiting window and balcony-door sashes, etc.), are binding.

Duty to inform and to instruct and use for similar kinds of hardware



Duty to inform and to instruct

In order to fulfil the duty to inform and instruct and also carry out maintenance work, the following documents in particular are available and must be forwarded via every intermediary and fabricator through to the end customer:

- Planning documents
- Product catalogues
- Hardware installation instructions
- Maintenance and care instructions and operating instructions, hereafter referred to as a whole or in part as "Product information" only for short.

In order to ensure the reliability of the corresponding function of windows and balcony-doors:

- planners must obtain and observe the "Product information" from the manufacturer or specialist retailer,
- specialist retailers must observe the "Product information" – particularly in relation to advertising measures – and hand this to the next dealer and/or fabricator with the instructions also to pass these on to their purchaser,
- fabricators must observe the "Product information, and in particular pass the maintenance and care instructions and operating instructions to the clients and users.

Use for similar hardware

The possible variants within the individual hardware systems – e.g. Tilt-Only and Top-Hung sash hardware, or those that offer a ventilation position instead of or in addition to the tilt position where the sash is parked parallel in order to produce a continuous all-round gap – must be dealt with in a similar fashion in terms of product information and intended use, misuse, product performance, product maintenance and duty to inform and instruct, depending on the relevant characteristics. Information provided by the Lock and Hardware Industry Trade Association e. V. Velbert Postfach 10 03 70, 42503 Velbert, Germany. The following documentation concerning the correct handling of hardware for windows and balcony-doors with detailed information and explanatory pictograms can be downloaded from the association's website (<http://www.fvsb.de/ggsb/richtlinien.asp>):

- Hardware for windows and balcony-doors – guidelines/advice on product and liability
- Hardware for windows and balcony-doors – guidelines/advice for end users
- Attachment of load-bearing components for Turn-Only and Tilt&Turn hardware with definitions for Turn-Only and Tilt&Turn hardware and also possible installation positions

Product maintenance



General notes

Safety-relevant hardware components must be checked at least once a year to ensure they are secure and not worn. If necessary, fixing screws must be re-tightened or the parts replaced. Furthermore the following verifiable maintenance work must be carried out at least once a year:

- Operational check and lubrication of all moving parts and locking points.
- Only cleaning agents and care products that do not interfere with the corrosion protection of the hardware may be used.

Adjustment work on the hardware – particularly in the area of pivot rests or stays – as well as parts replacement and hinging/unhinging of the opening sashes, must be carried out by specialists only. When a surface treatment is applied – e.g. painting or varnishing – to the window and balcony-doors, all hardware components must be excluded from the treatment and therefore protected against contamination.

Maintaining the quality of the surface finish

Electrolytically applied zinc coatings are not affected by normal room climates, providing condensation does not form on the hardware components or that condensation that occasionally forms is able to quickly dry. To maintain the surface quality of the hardware components on a lasting basis and prevent defects as a result of corrosion, observe the following points without fail:

- The hardware or rebate areas must be sufficiently ventilated – especially in the construction phase – to ensure they are not exposed directly to the effects of moisture or condensation. Ensure by taking appropriate (and lasting) measures that moist room air cannot condense in the rebate areas.
- The hardware must be kept free of deposits and contamination by construction materials (building dust, gypsum plaster, cement, etc.). Any plaster, mortar or similar must be removed prior to hydration with water.
- Aggressive vapours (e.g. caused by formic acid or acetic acid, ammonia, amine or ammonia compounds, aldehyde, phenols, chlorine, tannic acid, etc.) may promote rapid corrosion of the hardware components when combined with even small amounts of condensation. These kind of vapours must therefore be kept away from the window without fail.
- With windows and balcony-doors made of oak timber or another species containing a high proportion of (tannic) acid, make sure by applying a suitable surface treatment to the window that these substances cannot evaporate from the timber. The hardware must not come into direct contact with an untreated timber surface.
- Furthermore, acetic or acid cure sealants or sealants containing the ingredients referred to above must not be used as both direct contact with the sealant as well as the vapours it produces can attack the surface of the hardware.
- The hardware must only be cleaned using mild, pH-neutral cleaning agents in diluted form. Aggressive cleaners containing acid with all the ingredients referred to above or scouring agents must never be used.



Indicative character of technical information, exclusion of liability

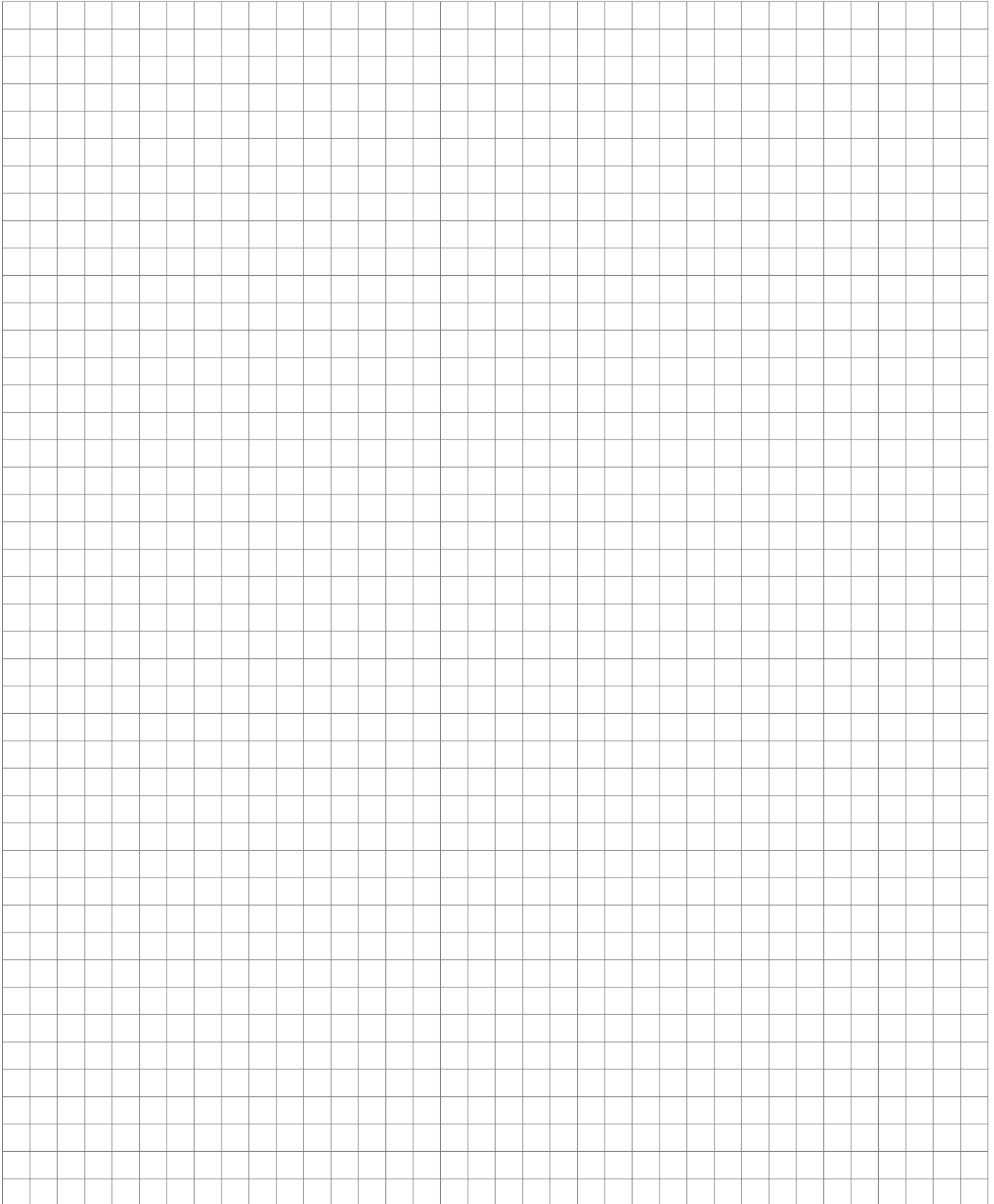
The technical documents are general informations based on our experience and tests and therefore does not take any specific application into account. They are intended as general information only for initial orientation, and must not be used as the decision-making basis. They reflect the version of the catalogue at the time of going to press. Although we have made every attempt to ensure the information provided here is accurate, it is non-binding. It should be adapted to the respective construction projects, usage and specific on-site demands. Due to further developments, and also to take current developments into account and exclude printing errors or other oversights or omissions, you can find the respective latest version of the binding technical documents at www.g-u.com. Be sure to use the latest edition of our technical documents.

The product images shown in the publication may differ from the actual product, particularly as a result of technical improvements. We would also like to draw your attention to the current information at the website mentioned above.

Copyright notice

© All illustrations and texts in this publication are protected by copyright. Unless otherwise stated on the image, the rights belong to the Gretsch-Unitas group. Any use of copyright protected materials without the consent of the holder of the rights is prohibited.

Publisher
Gretsch-Unitas GmbH
Baubeschläge
Johann-Maus-Str. 3
D-71254 Ditzingen
Tel. +49 (0) 71 56 3 01-0
Fax +49 (0) 71 56 3 01-2 93
www.g-u.com



This image shows a full page of blank graph paper. The grid consists of small, uniform squares formed by thin, light gray lines. There are no margins, text, or other markings on the page.



WINDOW TECHNOLOGY
DOOR TECHNOLOGY
AUTOMATIC ENTRANCE SYSTEMS
BUILDING MANAGEMENT SYSTEMS

Gretsch-Unitas GmbH
Baubeschlge
Johann-Maus-Str. 3
71254 Ditzingen
Germany
Tel. +49 7156 301-0
Fax +49 7156 301-77980

BKS GmbH
Heidestr. 71
42549 Velbert
Germany
Tel. +49 2051 201-0
Fax +49 2051 201-9733

GU Automatic GmbH
Karl-Schiller-Str. 12
33397 Rietberg
Germany
Tel. +49 5244 9075-100
Fax +49 5244 9075-599

www.g-u.com

Securing technology for you

